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To complete the case in favour of Lactagol as a galactagogue it may be added that not only has it been established on the evidence of the observations of thousands of medical men that Lactagol renews the lactic secretion, where there is no atrophy of the mammary gland, and increases the fats and albumin, but the experiments have been carried further and the scientific test of quantitative determination under the strictest possible conditions has been applied by experts whose reports show how much gain there is daily in fats and albumin under Lactagol treatment and how much falling off there is when the administration of the galactogogue ceases.

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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. I.—4TH YEAR. SYDNEY: SATURDAY, JANUARY 20, 1917. No. 3.

THE RECRUIT'S HEART AND SOLDIER'S HEART.[1]

By R. R. Stawell, M.D., D.P.H.,
Honorary Physician, Melbourne Hospital;
Lieutenant-Colonel, Australian Army Medical Corps.

In presenting for your consideration certain points concerning the recruit's heart and the soldier's heart, I would venture to ask you to recognize that I am not dealing with matters of only military medical importance, but with problems of the widest general medical interest.

The practical points concerning the problem of the recruit's heart may be almost limited to the question: What significance is to be attached to heart murmurs? The consideration of the problem concerning the soldier's heart may be commenced by another question: What are the causes and the basis of disordered action of the heart? What is the condition of the valves of the heart, and what is the condition of the heart muscle? These are the two questions in one sentence.

Concerning the recruit's heart, it is broadly recognized that if an applicant for enlistment has valvular disease of the heart he is to be regarded as unfit for active military service. Is this a wise view? In order to answer this question, two further subsidiary questions may well be asked: (1) How do you know there is any valvular disease of the heart? (2) Even if the condition of a valve is abnormal, are you justified in rejecting as unfit such a recruit?

Let me now touch upon the question of the signs of valvular disease of the heart; the assumption that in an apparently healthy man the presence of a murmur invariably indicates valvular disease is a view that few will be found to defend, and yet in actual practice and in the medical examination of recruits it is a view that is very largely, indeed almost invariably, held.

Since my return from war service abroad I have seen several young men who have been declared physically unfit for military service because a heart murmur was discovered. On examination, I found in these cases a murmur to be present, systolic in time, with its audibility loudest in the mid-sternal or pulmonary area, and with a comparatively limited area of conduction; that is, there was no conduction into the axilla, nor was the murmur audible at the angle of the scapula. The murmur, however, was most distinct, indeed, startlingly distinct, even harsh and blowing, when the "patient" was in the recumbent position; sometimes it could hardly be heard, and was frequently absent when the patient was sitting up comfortably.

In these cases of apparently healthy men there was to be detected no enlargement of the right side of the heart, nor any displacement of the apex beat. In each case the heart at the time of examination was beating vigorously, and the applicant was obviously nervous. This type of loud mid-sternal or pulmonary systolic murmur—it does not matter how loud it is—is not a sign of valvular disease taken alone; it is not even a sign of myocardial change. It is one of the murmurs that Sir James Mackenzie calls physiological; it is one of the murmurs that the older physicians called functional; and, if I may be permitted to give my own experience, it is the murmur which for twenty years I have taught students to regard as accidental. I do not know that the term accidental is good, but I do not know for certain the cause of the murmur, and adopted a non-compromising term. My own early experience was based largely upon the examination of children, and I found this and other basal murmurs not uncommon in the case of any excitable child or in the case of a child with high temperature and a feverish pulse. I believe its physical basis may be vascular and not actually cardiac, the murmur depending upon the close relationship of the pulmonary artery and the aorta, when both are beating vigorously. On looking at the relationship between the pulmonary artery and the aorta it will be seen that the right branch of the pulmonary artery is enclosed, as it were, in the arch of the aorta, and any dilatation of either vessel or any position that causes change of relationship of one vessel to the other would, I think, and does, I think, produce a murmur. This murmur, however, may be due to temporary dilatation of the right ventricle, and particularly of that part of the right ventricle known as the *conus arteriosus* or *infundibulum*.

Though I do not fully understand exactly what Mackenzie means by physiological when applied to a mitral murmur, I feel that we all should welcome the phrase physiological for this pulmonary murmur. As far as I can judge from his writings on the subject, I think Sir James Mackenzie means by physiological any murmur, whether it is due to structural valvular change or functional, which is not associated with heart inefficiency. While it is important to recognize that the pulmonary murmur may be physiological just as frequency of heart-beat may be physiological under excitement or exertion, exactly the same murmur with the same conditions of audibility does occur when it has a pathological basis. How then are we to distinguish between them? By attention to one sign and by attention to several symptoms.

In the pathological pulmonary murmur, there is evidence, very slight evidence it may be, of dilatation of the right side of the heart. The increase in the area of right cardiac dulness may be so slight as only to be detected when the patient is in the recumbent position, and yet, it seems to me, that this slight sign is sufficient evidence of a pathological condition. The symptoms to which attention should be directed are the ordinary symptoms of myocardial

[1] Read at a meeting of the Victorian Branch of the British Medical Association, on November 2, 1916.

weakness, hurrying pulse-rate, and breathlessness on exertion. This form of pathological pulmonary murmur is quite probably due to a definite dilatation of the *conus arteriosus* and of the right ventricle, and while being a functional murmur, as opposed to an organic valvular murmur, it is, when taken in conjunction with right cardiac dulness, to be regarded as a sign of definitely debilitated heart.

No better description of this murmur and its basis has occurred, so far as I know, than in Foxwell's Bradshaw lecture in 1899, and no better examples of its existence could be found than in one of the conditions known as soldier's irritable heart.

Apart then from definite pulmonary stenosis, which is very rare, even in children, a pulmonary systolic murmur is not a sign of valvular disease, not even in a patient with symptoms of heart weakness, while in an apparently healthy man, a young recruit, for instance, it is to be regarded as physiological, and is of the same significance as a heart beating fast under excitement, nervousness or exertion. Even when this murmur is associated with evidence of dilatation of the right side of the heart, and with symptoms of myocardial weakness and anginal pains, the whole abnormal condition may be very temporary, due to some already past infection or transient toxin; it will be found that under regulated rest and graduated exercise, and no heart tonics, the abnormal signs may entirely pass away.

It is quite clear that one is not justified in rejecting or even in postponing acceptance of the recruit with the physiological murmur, and it is quite clear that one should postpone, but not reject, the recruit with the transient debilitated heart murmur. If only the problem were as simple as that there would be no difficulty in practice; but there are a definite number of cases among recruits, and, of course, always in civil practice, in which there are slight thyro-toxic symptoms present as well as the physiological murmur. Again there are cases where there is evidence of slight but apparently indubitable structural valvular change, easily overlooked, but associated with it is a murmur, a physiological murmur, not possible to ignore. The presence of mitral stenosis or myocardial regurgitation does not exclude the presence of an accidental functional murmur; indeed, it predisposes towards its occurrence.

What is the wisest practical point of view to take of these medical problems? Is it best, if a man says he feels fit, and has been doing hard work without undue fatigue up to the time of enlistment, to pass him as fit, unless something is found in his heart that is overwhelmingly significant of danger or of diminution of reserve? Are we to follow Sir James Mackenzie and say in fact, "As far as the heart is concerned, any candidate is fit for the army, if he can undergo severe bodily exertion without distress; as long as this is the case and as long as there is no great cardial enlargement, compromising physical signs may be bidden 'go hang.'" I cannot satisfy myself that it is reasonable under present conditions of medical education and thought and under present army service conditions to take up that attitude.

It is perfectly true that men with gross valvular lesions may show no symptoms of heart disease. I have had, for instance, under my examination soldiers who had gone through all the continuous and awful hardships of the campaign at Gallipoli without any cardiac distress, and yet, on being admitted to our hospital for some transient and trifling complaint, were found in the routine of examination to have gross valvular disease, of course, with good hypertrophy. Others have been sent up to our hospital in Egypt because the regimental medical officers had discovered gross signs of valvular change while systematically overhauling each man in camp, before the regiments were sent away to France; yet these men had never "paraded sick," and were indeed very well. Still, they were sent to the base hospital, branded "V.D.H.," which means valvular disease of the heart, and ordered to be declared permanently unfit. On the other hand, we had a small number of soldiers sent all the way from Australia as fit, who, on arrival in Egypt, broke down after the first week's work in camp, and were found, as far as auscultory examination went, to have much the same valvular lesion as those who had endured without distress all the worse hardships of the hardest campaign. It may be noted that the commonest form of valvular lesion which seemed to be unassociated with any evidence of myocardial weakness were diseases of the aortic valves, apparently of non-syphilitic origin, but a few cases apparently of mitral valvulitis were observed, in which full compensation had been present and had withstood the severest trials.

While on active service, Colonel Maudsley and I often discussed these heart cases, and discussed the attitude of medical officers towards them, and we came to the conclusion that, anyway for the Australian Army, it was best to adhere to the official view, that no case of undoubted organic valvular disease of the heart, even if it appeared to be fully compensated, should be admitted as fit, that sooner or later the lesion would be detected and the man would be sent back as having been permanently incapacitated while on war service. Though the army might lose a few good men for a few months' work, yet the country would not have the additional burden of compensation for these men, whose ill-health did not depend upon military work.

If all medical officers were expert physicians, and all were in agreement on the points of these problems, I should certainly follow Mackenzie's memorandum, as published under the heading, "Examination of the Recruit's Heart." In the meantime, I believe that, in the main, it is best to emphasize the existence of murmurs, which are to be regarded as physiological, or accidental, or functional, and are not to be regarded in the recruit as signs of unfitness, and to emphasize the further point, that by means of careful heart measurements, these murmurs ought to be distinguished from those of organic origin. Provisionally, indubitable valvular disease of the heart is in the recruit to be regarded as a sign of unsuitability for active service abroad, even if it is not reasonable to regard it as a sign of actual unfitness. I think it is a matter for

regret that in the official directions for the details of the medical examination of recruits, the medical officer is instructed to examine "The action of the heart and the heart sounds." That is all; nothing is said about the examination of the size of the cavities of the heart, which is, after all, perhaps the most important part in the mere physical examination of the heart.

As regards the recruit's heart, I think there can be no difference of opinion that those irregularities of rate and rhythm of the nature of *sinus arrhythmia* and occasional premature contractions can be easily recognized, and may be ignored as evidence of the slightest degree of heart disease. I am not so sure that it is reasonable to ignore more frequently-occurring premature contractions, and I am not sure that it is reasonable to ignore any disturbances of heart rhythm, of which the patient is himself acutely sensitive. I would regard such conditions as evidence of unsuitability for active service, even if not of actual unfitness.

I have already referred to the difficulty that exists for the examining medical officer in recognizing at one examination the presence of slight degrees of thyrotoxic symptoms. How is the medical officer to differentiate the signs of nervousness, of "funk," with its hurrying pulse-rate and slight tremulousness from the signs of slight hyperthyroidism?

I do not think it is possible to make this diagnosis at one examination, without a history from the medical attendant of the recruit, and I am unquestionably impressed with the wisdom of regarding as unfit for active military service all cases of a definite, even of a very slight degree, of hyperthyroidism. It seems to me certain that, whatever views we may hold concerning the clinical condition known broadly as soldier's irritable heart, we must accept the suggestion that hyperthyroidism is the preponderating cause of one form, but one form only, of this condition of irritable heart. The two most commonly occurring forms of irritable heart, as I saw them in Lemnos and in Egypt, were not associated with sure evidence of excessive thyroid activity. For instance, while in the typical soldier's heart there is certainly frequency of pulse-rate and the presence of palpitation, there is no flushing and sweating, but rather coldness of the hands, and at the most a condition of clamminess, and there is no fine tremor, though under examination there may be the presence of some tremulousness.

Let me quote the following description of one common form of this condition, as given by three well-known London physicians: "The onset may be sudden or gradual. In some, it occurs during the period of training; in others while serving actively in the trenches. The symptoms are aches or sharp pain over the region of the heart, sometimes radiating, but rarely severe, breathlessness and palpitation on the slighest exertion, a sense of fatigue or exhaustion with effort, and oftentimes giddiness; occasionally, actual fainting may occur. On examination, the heart's action is vigorous, the apex beat is often forcible and diffuse, the limits of dulness are not usually increased, no murmurs are heard as a rule, but a systolic murmur may be present and audible from apex to base. The pulse-rate is notably increased, and it is peculiarly susceptible to posture and exercise. The blood-pressure may show a marked fall as the patient passes from the lying to the upright posture. In many subjects there are other evidences of vaso-motor instability, coldness and blueness of hands and feet or a prominent *tâche*."

This I would call the first type of soldier's heart, and would suggest as its physical basis general toxæmia with slight myocardial weakness and much vaso-motor instability and fatiguability. It is to be noted that vaso-motor instability must probably be associated with deficiency or instability of adrenalin output. Lewis and his fellow-workers look upon the general toxæmia as the result of some form of sepsis, and in all probability they are in the main correct in this view.

The second type, which was in the heat of Egypt and under conditions at Gallipoli and at Lemnos, by far the most common form of soldier's irritable heart as seen among our own men, has much the same signs or symptoms as the first form, except that there is definite evidence of toxic myocarditis or myocardial cell spoiling, such as would be shown by dilatation of the heart, both of the right and left ventricles, with the more constant occurrence of a mid-sternal or apical systolic murmur of the debilitated heart character. On measuring the blood-pressure in these cases it will be found that the difference between the diastolic and systolic blood-pressure may be much reduced from the normal; for instance, with a hurrying pulse, the systolic blood-pressure may be only 120 mm. or 130 mm. Hg., and the diastolic blood-pressure may be 100 mm. Hg. This second form of soldier's heart follows frequently upon some definite form of general infection or local septic infection, influenza, epidemic jaundice, dysentery, tonsillitis, or septic wounds; it occurs just as frequently after over-exertion in hot weather, and must then be due in the main to the toxic condition known as heat stroke.

There is a third and more dangerous form of this condition of irritable heart, which is obviously dependent upon a more severe degree of myocardial cell spoiling. In these cases there may be no great degree of tachycardia, but anginal pains and breathlessness of the most marked type and a very low pulse pressure are the gravest signs. I would feel inclined to emphasize here the reasonableness of applying the term "anginal" to all degrees of cardiac pain, that is, all degrees of pain produced on exercise or exertion, or associated with any change in circulatory conditions. It seems most undesirable to retain such a term as "false angina," while it seems to me very reasonable to make it clear that cardio-vascular conditions, which are controllable, remediable, and of a temporary nature, may yet be definitely productive with true angina. I remember a case of a soldier who was admitted to the No. 3 Australian General Hospital as an example of functional heart. The patient complained of pain and breathlessness on exercise, even of the slightest kind. One morning, after merely getting out of bed to

help the orderly to arrange his bedclothes, this young soldier collapsed and died in a few minutes. At the post-mortem examination no evidence of syphilis was found, and nothing abnormal could be detected, except some recent spoiling of heart muscle cells. This man had been sent to the hospital as a functional case, though there was evidence of heart weakness following on over-exertion after a slight influenzal attack.

In striking contrast to this third type is the thyrotoxic form of soldier's heart, in which tachycardia and the classical symptoms and signs of early Graves' disease are present. It is to be noted in these cases, in the early stages at least, that there is no striking degree of vaso-motor asthenia, as clinically measured by the lowering of the blood-pressure on assuming the upright position, and there is no marked myocardial asthenia, as clinically measured by ascertaining the pulse pressure. Indeed, these cases frequently show a high blood-pressure, the diastolic pressure registering 90 mm. Hg., for instance, and the systolic pressure reaching as high as 170 mm. Hg.

Though I feel in the main that these suggested subdivisions of the clinical condition known as "soldier's irritable heart" are of a certain value as giving definiteness to a difficult clinical problem, yet I must point out that the existence of one form of the disease does not, as far as I can judge, exclude the presence of another form. The thyrotoxic form may be and often is associated with a more definitely myocardial form, and the myocardial form is frequently and definitely associated with the vaso-motor or adrenalin-insufficiency form.

As indicating the difficulty of refinement of diagnosis, I have had the interest and the experience of seeing here two cases of returned soldiers suffering with unmistakeable Graves' disease, cases which I had diagnosed in Egypt some months previously as "irritable hearts of the vaso-motor form."

As regards the causes of these conditions of soldier's heart, while there are several points which might demand consideration, there are two points which emerge above all others as clear and important causal factors: first, over-exertion, and second, infection and sepsis.

As far as I can judge, there is a slight tendency in England to minimize the influence of over-exertion, and such a view may be true of war work in France and Flanders, but I wish only to speak of what I have seen. From the history of many cases which came under my notice in Egypt, I could find in them no causal factor to account for the irritable dilated heart, except over-exertion in the heat and sand of the desert. For instance, several regiments of men, apparently in good health, were called upon to carry out through the desert a forced march with "full kits up." Many scores fainted and collapsed on the march, some actually died, and others were sent up, later, to our hospital with a condition of irritable heart. Most of them showed definite myocardial dilatation, the usual irritable cardiac action, and the vaso-motor instability. I could find no evidence, no source of septic infection. Heat stroke, that is, the result of muscle over-exertion in the heat, produces spoiling of myocardial cells and neurone terminations; of that, I am convinced. Of course, all degrees of "cell spoiling," from very transient to apparently permanent, are produced; apart from high atmospheric temperatures, over-exertion of muscle and strain and prolonged fatigue will produce the same kind of toxic effect as may be seen in the most striking form of "heat stroke."

That over-exertion is most likely and most liable to produce the bad effects known as "heart strain," when there is some infective or septic toxins present in the blood, is now fully recognized, and it is probably true that many cases of irritable heart occur and persist, instead of recovering, because unrecognized sepsis is occurring and persisting. Particularly does this appear to me to be true of sepsis from tonsils and from the tracts and sinuses and antra of the nasal region. Probably it is true of even more obscure forms of infection, for Lewis and his fellow-workers suggested that the infection might be due in these cases to non-pyogenic organisms in the urine. While it is obviously reasonable to assume myocardial cell spoiling and neurone cell-termination spoiling, with diminution of their functional efficiency, as due to toxins and sepsis, I find it difficult to accept the view that over-activity of any organ is directly due to septic toxins. I find a difficulty, for instance, in ascribing hyperthyroidism, that is, over-activity of the thyroid, to the same poison which produces diminished activity of the vaso-motor system (adrenalin defect) and diminished efficiency of heart muscle.

The toxic influence of tobacco in these cases has been much discussed. I am, myself, not much impressed with the evidence of its harmfulness, though it may be, and I think it is, a contributing factor in the continuance, certainly, and probably in the causation, of certain symptoms. I have discussed the matter with officers of the Indian Medical Service, and they and others point out that the Sikhs, who do not smoke, suffer from soldier's irritable heart as much as the men of other regiments and other tribes, who make a custom of smoking. (See appendix.)

I said at the beginning of this address that the soldier's irritable heart was of the widest general medical interest. Though it is true that under no conditions of civil life are men called upon to face the hardships and to do such hard work as is demanded of the soldier on active service, yet we meet with many cases of strained irritable heart in ordinary medical work. The underlying cause in these cases is, I believe, some infection or some sepsis, and then on top of this cause is some exciting factor, such as injudicious or ill-timed vigorous exercise or prolonged effort, which determines the condition known as heart strain. While the sepsis persists, the disturbance with genuine angina will persist.

As regards prognosis and as regards treatment, I would propose to leave these matters for discussion at a later date. In presenting certain points only of the problems connected with recruit's heart and soldier's heart for your consideration, and in presenting those points only very shortly, I venture to

hope that emphasis would be of more interest to you than completeness in dealing with the problem. and though I recognize that much of what I have said must be commonplace knowledge to many of you, I have tried to give you the best of my impressions out of the treasure-house of my recent military medical experience.

The opportunities for investigating and classifying most of these cardiac cases were made not only possible for me, but were made interesting and stimulating for me by the keenness in their work shown by my colleagues on the staff of the No. 3 Australian General Hospital, and I feel greatly indebted to them for all the help given and all the cordiality shown by them in our work together. Major Clarence Read (Sydney) and Major Herbert Stewart (Brisbane) will recognize in this paper definite cases of their own, and they and Captain Matthews (Sydney) and Captain Lawton (Melbourne) will recognize in this review the result of many discussions and many meetings when "boarding" cases.

Appendix.

I have included under the term soldier's irritable heart most of the types of cases sent up to our hospital diagnosed as functional heart, or "D.A.H." (disordered action of the heart). I have purposely included under the category of soldier's heart cases of grave myocardial poisoning, because these cases were, as a matter of fact, sent to the hospital as functional and irritable heart, and I wished to emphasize the existence of some myocardial involvement in all forms of soldier's irritable heart. I have, perhaps unreasonably, excluded the heart that may be called the smoker's heart from my classification of soldier's heart. I recognize that soldiers suffer from smoker's heart as much as civilians, but I believe that there is a tendency on the part of medical officers to consider all disordered action of the heart in military life as due to smoking, and to overlook and ignore sources of sepsis and the presence of infective toxins. I would suggest that a typical smoker's heart shows itself by palpitation, frequently coming on when the patient is at rest in the evening or at night, and not necessarily and not invariably induced by exertion or even by the slightest exercise. I am willing to accept this form of palpitation in smoker's heart as conceivably due to a temporary unantagonized action of the thyroid gland, the loss of balance being the result of a temporary deficiency of the load of adrenalin contained in the tissue. It seems to me, however, undesirable at present to attempt to formulate, with any appearance of accuracy, the influence of the suprarenal glands in the production of some of the clinical conditions known as soldier's irritable heart, just as it seems unreasonable and quite wrong to ascribe all the conditions known as soldier's heart to hyperthyroidism.

A Bill to amend the "Public Health Act" of 1913 was circulated on December 17, 1916, among the members of the Legislative Chambers of Tasmania. The provisions of this Bill deal with the legislative control of venereal diseases, and are on the same lines as those of the Western Australian Act.

Reports of Cases.

A CASE OF HYDATIDIFORM MOLE.[1]

By J. Goodwin Watson Hill, M.B. (Sydn.),
Newtown, Sydney.

In presenting to you these notes on a case of hydatidiform mole, I must apologize for a certain precipitancy in reporting a case which came under my care only ten days ago. I should have waited longer, only that Dr. Abbott was faced with a dearth of clinical material for this evening, so I submit to your consideration the notes on this case, as far as it has gone, and trust that there will be no developments worthy of further report.

Hydatidiform mole is a comparatively rare occurrence. Tweedy and Wrench quote one in 1,989 deliveries and abortions at the Rotunda Hospital. Its rarity, its peculiar appearance and the apparent absence of fœtal rudiments led early observers into many strange theories. Hence the name, hydatidiform, as many theorists held that the structure was analogous to the true hydatid cyst. Others held that the vesicles were mature ova, and yet others that each vesicle represented an early pregnancy. This last theory evidently gave rise to the report on the case of Countess Hagenau, who was recorded to have given birth at a single labour to three hundred and sixty-five embryos—one for each day of the year.

The disease consists of a cystic proliferation of the chorionic villi; hence it must begin before the formation of a placenta, *viz.*, before the end of the third lunar month.

The disease has a fœtal origin, as is evidenced by the fact that it may occur in twins, affecting only one ovum.

Investigations into its microscopic structure and into the structure of chorio-epithelioma led to the conclusion that there is some genetic relationship between them, especially when statistics showed that in from one-third to one-half of the cases of hydatidiform mole it was followed by chorio-epithelioma. Observers now agree that the differentiation between a benign and a malignant mole in the early stages is impossible, as the difference is biological rather than histological, and, consequently, it is impossible from histological evidence to predict the outcome of any given case of hydatidiform mole.

The disease may occur at any period of reproductive life. It may occur early in pregnancy and cause the death of the fœtus. Williams states that if it occurs comparatively late it does not implicate the entire chorion, in which case, even if the disease is mild, the development of the fœtus is seriously impaired.

As a rule, the fœtus dies, and is absorbed, the only remnant being the maternal end of the umbilical cord.

As the chorionic villi are nourished by the maternal blood, the condition persists long after the death of the fœtus, and attains considerable size, though expulsion before the sixth month is the rule.

The clinical features of the disease, in addition to the signs of pregnancy, are a noticeable enlargement of the uterus, far exceeding the size corresponding to the period of amenorrhœa, a discharge of blood or blood-stained, watery fluid. Abnormal pain and severe nausea are also of frequent occurrence. The uterus feels doughy. There are no fœtal sounds.

The diagnosis can only be clinched by the discovery of the cysts, like white currants embedded in rice jelly.

The treatment, when diagnosis is made, is to empty the uterus—a proceeding of considerable risk, as frequently the patient has lost much blood and is in a parlous state. The removal of the growths is often attended with profuse hæmorrhage, as the proliferating cysts may have deeply infiltrated the uterine wall. The curette is dangerous in these cases. The finger is preferable, and even that must be used with caution. The uterus should be packed. Care should be taken to see that no cysts are left loose in the vagina, as they have been known to implant themselves

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[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on November 10, 1916.

on the vaginal mucosa. A preliminary injection of ergotin is recommended.

The after-treatment is that of the puerperal state.

In some cases hæmorrhage recurs after two or three days. Tweedy and Wrench quote a case which they had to curette and repack six times before the hæmorrhage ceased. Scrapings should be submitted to a competent pathologist, and the patient should be kept under observation for six months at least after discharge from hospital.

The specimen shown is from the case of Mrs. B., aged 55 years. She has fourteen children, the youngest eight years old, and had two miscarriages about 20 years before. She led a perfectly healthy life till six years ago, when she had measles, from which she made an uninterrupted recovery.

Since her last labour menstruation had proceeded naturally till last September, when she missed a period. A fortnight later she began to lose a little blood from the vagina. The amount was small, the colour dark red and the occurrence intermittent. About this time she received the news of the death of her eldest son in action. About the middle of October she began to feel sick, as if she were getting influenza. She vomited immediately after food, lost weight, looked yellow and felt feverish and weak. The discharge was still scanty, but dark. She came to my rooms on November 1, 1916. On examination, I found that the patient was a strong, country woman; she looked haggard, had a yellow tinge in the skin and conjunctivæ, and was somewhat dyspnœic. Her pulse-rate was 120, weak, and at times irregular. Her temperature was 99.6°. Her tongue was coated. A median hypogastric tumour was present just below the umbilicus. It was smooth and uniform, showing alternate hardening and softening under the examining hand. *Per vaginam* the cervix was found to be central, soft and boggy. The mass was movable, and felt almost cystic. The fornices were clear. The vaginal discharge was a brownish green colour, suggestive of the presence of meconium. I thought the case was one of death of the fœtus, and sent the patient to "Braeside." Albumin was present in the urine.

In the hospital the vomiting became less marked and the pulse-rate remained at 110 to 122, but the respiration became very hurried.

Dr. Gordon Craig saw her in consultation with me on November 3, and, in view of the deterioration, the condition of the patient's heart, as evidence by the rapid pulse, outward displacement of apex-beat, systolic bruit, dyspnœa and cyanosis, it was decided to empty the uterus. At mid-day a tent was inserted. During the day the dyspnœa became more distressing and the pulse-rate rose to 160. At about 11.0 p.m. a large clot was expelled and the patient's respiration became easier. At midnight a hydatidiform mole was expelled, without much hæmorrhage. The patient was placed on the table and the uterus was cleaned out digitally and packed with iodoform gauze. The discharge of the mole was followed by further improvement in the patient's respiration. A hypodermic injection of "Ergot aseptic" was given before the uterus was explored and a hot douche after.

A troublesome complication was the presence of a small pustule, discharging pus freely from the anterior portion of the left *labium majus*. This was cleansed and covered over. The gauze was removed in 12 hours, and contained a small piece of membranous material. No hæmorrhage has occurred. The day after the discharge of the mole the patient's temperature rose to 102°, and for three days it kept between 101° to 103°; the pulse-rate rose to 195 and became irregular, but her general condition seemed so good, there being no hæmorrhage or offensive discharge, that, beyond a little pituitrin hypodermically and a mixture of digitalis and nux vomica, I refrained from meddling, and was rewarded on the seventh day by a fall of temperature and pulse-rate, which have remained normal up to the present. The patient is now apparently on the high road to recovery. The pulse and temperature are normal, the respiration is easy, the appetite is good and the bowels are regular. There is no vomiting and very little discharge. The uterus is small and hard.

I hope to keep her under observation for some months.

The specimen is being treated by Professor Welsh. It shows the typical clusters of vesicles and some pieces of membranous material, probably the fœtal membranes.[1]

Reviews.

CHILDREN'S DISEASES.

"Diseases of Children," by A. Dingwall Fordyce,[2] is a systematic treatise. The author has endeavoured to provide students and practitioners with a practical modern manual within a small scope, and yet complete in itself. He has succeeded admirably. He deals comprehensively with the medical diseases of children and briefly with the principal surgical diseases of childhood. Notwithstanding the limited space in which he has confined himself, the author has been enabled by his great experience and his good judgement to present a book of considerable value to the senior student, the general practitioner and the pædiatrist. The volume is well illustrated with drawings and photographs. There are many radiographs demonstrating important points in diseases of the bones, abdominal organs and lungs. Considerable space is devoted to the subject of the feeding of infants and to the diseases of the digestive tract. In his description of the disorders of digestion and nutrition the influence of the German writers, Czerny, Keller and Finkelstein, is evident. It appears to us that the subject of infective or summer diarrhœa has not received the attention its importance deserves. Notwithstanding this slight defect, we can confidently recommend the book to all those on the look-out for a compact treatise on diseases of children.

Naval and Military.

On January 11, 1917, the 262nd list of casualties was issued. The list, which contains 974 names, informs us of the death of 160 men, and the wounding of 211. It is with great regret that we note that the name of Captain F. P. Money is included in the list headed "Died of Other Causes." In the same list Captain J. Gray's name is among those of the wounded, and Captain J. L. Harrison among those ill in hospital. Major R. A. P. Waugh is returning to Australia.

In the 263rd list, which was issued on January 12, 1917, the names of Captain W. H. Weston and of Captain B. C. N. O'Reilly appear among the list of those ill in hospital.

There are no medical men mentioned in the 264th list, which was issued on January 15, 1917.

THE FEDERAL SERUM INSTITUTE.

We are informed that temporary premises have been secured in the upper floor of the Walter and Eliza Hall Institute of Research in Pathology and Medicine at the Melbourne Hospital for the new Federal Serum Institute. The laboratories have recently been completed, and, thanks to the good offices of Professor Sir Harry Allen, the trustees of the Walter and Eliza Hall Fund have agreed to place them for the present at the disposal of the Quarantine Department. Plans have been prepared for the permanent Serum Institute, and the building will be begun shortly. In the meanwhile a beginning will be made at the temporary premises.

It is announced in the *Commonwealth of Australia Gazette* of January 11, 1917, that Dr. J. M. Sanderson has been appointed Acting Quarantine Officer, Thursday Island, during the absence on sick leave of Dr. N. Markwell.

[1] A snipping has subsequently been taken from the cervix, which Professor Welsh has reported as showing mucous cysts, but no evidence of malignancy.

[2] Diseases of Children, by A. Dingwall Fordyce, M.D., M.B., Ch.B., F.R.C.P.E.; 1916. London: A. & C. Black, Ltd.; Crown 8vo, 32 plates, 84 illustrations, pp. 483. Price, 10s. 6d.

The Medical Journal of Australia.

SATURDAY, JANUARY 20, 1917.

The Health of the Young.

It has long been recognized that the qualities of nations as well as of individuals are developed in the young elements, and that the old adage: the child is father to the man, has universal application. The mental attributes of children are largely the resultants of inherited qualities, and types may appear frequently in a nation, owing to the fostering of a particular group of qualities and the nurturing of conduct based on definite ethical conceptions. Experience teaches that changes in national mental characteristics develope slowly, and are rarely the result of deliberate education. Circumstances may arise which necessitate an increase of studiousness and a sharpening of the power of acquiring knowledge. On the other hand, circumstances may lead to an indulgence of individuals in luxurious habits and laziness, with an associated neglect of refinement in education. For the healthy development of any nation or race, endeavour toward the purposeful training of mental activity is an essential. Parents who neglect to awaken in their children a spirit of obedience, diligence, truthfulness and frankness, teachers who fail to stimulate in their pupils a desire to learn, and to mould them into useful members of the community are not fulfilling their obligations to their nation and to humanity in general.

While the moral and mental education of the children requires the efforts and goodwill of parents and school teachers, the prevention of deteriorating diseases and the raising of the health of the young are matters which concern the medical profession. Indirectly the parents and the education authorities may be held responsible for the maintenance of health among children; but both are compelled to place the task of applying preventive medicine and directing a hygienic control into the hands of medical men and sanitarians. Parental responsibility can be clearly defined; but, unfortunately, no uniformity of interpretation or of fulfilment can be introduced. The education authority throughout the civilized world has recognized certain fundamental principles on which public action should rest. In the first place, a general education becomes illusory unless those avoidable noxes which directly or indirectly restrict the teachability of children are removed. In the second place, a grouping of the children according to their physical and mental characters is essential for success in the education system. Thirdly, the efforts of the education authority must be co-ordinated with those of the public health authority, in order that overlapping and the adoption of opposing measures may be avoided. The obligations of the education authority render it essential that records should be kept of the conditions under which the children are housed and educated in schools. This involves a constant supervision of the sanitary condition of the school buildings and grounds, a regulation of the selection of children for particular schools and classes, according to their age, mental development and general health, and a plan of supplying those children who do not obtain sufficient nourishment at home with proper food. Records must also be kept of bodily defects which may interfere with the education of the children. All these records form the basis for a broad scheme of amelioration, which should have for its object the removal of all avoidable factors contributing to physical and mental weakness and disease. By means of medical inspection those responsible for the care of the children during the period of school attendance are enabled to determine the presence of conditions which produce deterioration and to measure the effect of the various means of prophylaxis and amelioration which can be adopted on a large scale. It is therefore of the greatest importance that the medical inspection shall be carried out carefully, skillfully and uniformly. It is highly desirable that uniform standards of the defects to be notified should be introduced, but it is necessary in fixing these standards that consideration should be given to two factors, *viz.*, the methods of examination and the object of the inspection. Under the conditions obtaining at present in the Commonwealth the treatment of disease as far as it affects the individual

members of the community is supplied by the medical officers of hospitals and friendly society lodges and by private practitioners. The only exception to this rule is to be found in the public services, and in some of the civil services the provision of medical attention is partial. On the other hand, the protection of the public against infective diseases is placed in the hands of the public health authority, and the task of the education authority should be restricted to general control and not be extended to individual treatment. For example, if a child at school is found to be suffering from postural scoliosis the teacher should be instructed to control the position the little one takes at the desk, and to give it the advantages of physical training. The medical officer should pay attention to the position of desks, the lighting of the rooms and the print in the books employed. when defective eyesight is discovered in several children. The knowledge acquired at the inspection should be imparted to the parents, so that the defect may be remedied, if possible, and in order that this advice should not be empty, arrangements can be made with existing organizations or with individual medical practitioners. Medical inspection reveals conditions which are caused or aggravated by bad home conditions, and a modern method of control will take into its scope the investigation of the houses from which the children come, the diet of the children at home, and the general observance of hygienic principles on the part of the children and their parents. Amelioration, in the sense in which it was employed in the early days of medical inspection of school children in England, means the combating of removable noxes which may produce unhealthy bodies and minds in children attending school. The task of applying these measures of amelioration is immense, and the handful of school medical officers in the Commonwealth cannot hope to cope with it in its entirety. To endeavour to carry out treatment as well is to impose on the education authority a work as impossible of completion as that of the Danaids. From the records of the Conference of School Medical Officers it will be seen that in New South Wales the officers are asked to detect cardiac lesions, pulmonary disease and lateral curvatures of the spine without undressing the children. This suffices to prove that the children would not derive any benefit by the extension of the work of the inspectors to treatment, for the treatment, under the existing conditions of a small staff and an immense amount of work, will, of necessity, be based on a doubtful diagnosis.

LARYNGEAL DIPHTHERIA IN ADULTS.

Medical practitioners appear to have great difficulty in discarding old terms, which, in the light of freshly-acquired knowledge, have been shown to be misleading and to be based on a wrong conception. It is still common to read the terms "phthisis," "typhoid fever" and "croup" in official reports. Before it was established that every case of wasting with signs of chronic disease of the lungs was not due to tuberculosis the use of the term "phthisis" was probably justified; but it is a misleading expression for chronic pulmonary tuberculosis, and should not be used as a synonym. In the olden days, before the pathology of enteric fever had been studied, it was excusable to use a name which implied that the condition was in some way connected with typhus fever. Similarly, the use of the term "croup," notwithstanding that it signifies a symptom and not a disease entity, was permissible before it was demonstrated that diphtheria may affect the larynx and give rise to laryngeal obstruction. It is not quite safe to assume that all the cases formerly described as "croup" were instances of diphtheria of the larynx, although in the majority of cases the supposition would probably be correct. It appears that a condition which was probably identical with laryngeal diphtheria was observed 300 years ago. Descriptions of this affection, which was characterized by the presence of membrane forming in the larynx and occurring during epidemics of a membranous form of sore throat, have been published from time to time, until the differential diagnosis could be made by bacteriological methods without any uncertainty. Moreover, it has long been recognized that this condition affected adults at times, and was particularly fatal in them. Dr. J. D. Rolleston[1] has written on this subject, and has pointed out some significant facts, to which the attention of the medical profession should be directed. In the first place, the affection in adults is extremely rare. In the course of just over 16 years, 11,313 patients suffering from diphtheria were admitted into the Grove Hospital in the south of London; of these, 1,156 were suffering from laryngeal diphtheria, including four adults. He admits that a routine laryngoscopic examination would probably have discovered other cases in which the larynx was affected; but he is willing to limit himself to cases in which adults showed signs and symptoms of true laryngeal diphtheria and to exclude Ruault's so-called "latent croup." In his cases and in those recorded by other observers, dyspnœa did not make

[1] *Clinical Journal*, November 1, 1916, p. 389.

its appearance at all, or occurred late in the disease. The most striking symptoms were extreme prostration and intoxication. The prognosis is said to be grave, and a fatal termination to occur suddenly, albeit somewhat late. He places on record that his four patients were admitted into hospital on the sixth, sixth, fifth and fifth day of disease respectively, and that death took place in three on the day following admission. One patient recovered. From these facts and from the experience of Veillon and Brelet, Ruault and Ker it appears that Rolleston's dictum that the prognosis is very grave and that antitoxin is inefficacious needs some elaboration. In adults, stridor and dyspnœa do not set in till late. The diagnosis of severe diphtheria is not, as a rule, made until the stage has arrived when antitoxin is usually of small avail. In many cases the process has extended not only to the larynx, but also to the trachea and bronchi, and the late dyspnœa is often localized low down, and is not truly laryngeal. The early symptoms in the adult may include sore throat, vomiting and cough, while aphonia is comparatively seldom. Despite the rarity of the affection in adults, it is advisable to anticipate severe diphtheria in persons associated with children who are suffering from the disease, and to administer a dose of antitoxin as a precautionary measure as soon as the slightest sign of faucial or laryngeal inflammation manifests itself to the eye. In other words, the treatment of this rare and dangerous condition resolves itself in the free and early employment of the laryngoscope, and in the application of antitoxin on the slightest provocation. In this way laryngeal diphtheria in adults as a recognized affection might disappear from our case books.

INSECT PESTS AT SALONICA.

A meeting of the Salonica Medical Society was held on May 17, 1916. At this meeting Lieutenant-Colonel Andrew Balfour, C.M.G., read a paper of unusual interest on the medical entomology of Salonica. It is true that the communication does not contain any new facts, and that it does not exhaust the entomologist's knowledge concerning the winged and unwinged insects abounding in Greece. On the other hand, the virile manner in which the author handles his subject, the happy combination of scientific knowledge with practical measures and the pleasant interspersion of a light vein of writing raise this contribution above the majority of those in which the life history of mosquitoes, flies and other insects is dealt with. He starts with a dissertation on the common house fly, and enunciates the doctrine that fly extermination is hopeless, while fly prevention within certain limits is not only possible, but essential. The latrine fly occupies his attention next, and then the green-bottle and the blue-bottle. The reader is taught how to distinguish these flies at a glance, and what is known of these insects as disease carriers is recited in a fascinating manner. The Stomoxys and the tick fly are reserved for description at the end of the list. He points out that the Hipposcidæ of the dog have been accused of carrying *Leishmania tropica*, the causal organism of oriental sore. This fly is not easily killed, and he therefore advocates an imitation of the tactics of Cromwell in the case of Charles I.

The subject of mosquitoes receives his best attention, both by word and by picture. In regard to their habits, he confines himself to the conditions obtaining in the neighbourhood of Salonica; but his descriptions contain sufficient detail of life histories to enable the reader to gain a clear conception of this subject. The minute *Phlebotomus papatassi*, at times called the sand-fly in error, and the Simulidæ, or true sand-flies, appear to be common in Salonica. The former is the vector of three-day fever. Colonel Balfour advocates the use of cassia oil, or a mixture of eucalyptus oil, oil of anise and oil of turpentine in lanoline as a repellant both for these flies and for mosquitoes. A lump of camphor "as a bedfellow" is also suggested for the same purpose. He points out that one of the species is called *Simulium damnosum*, and relates how an irate friend of his described them as the misbegotten progeny of a female Culex and a deformed house-fly. Balfour considers that his friend had some justification for casting doubts on the fly's ancestry.

The Tabanids, Hæmatopotas and Chrysopidæ are only mentioned *en passant*, before the wingless pests are introduced. In his dry fashion, Colonel Balfour makes allusion to a recent investigation into the propagating powers of the body-louse. The female louse, he says, during the six weeks of her eventful life, can actually produce 8,000 young. "Solomon advised the sluggard to consider the ant. Were he alive now, he might recommend the average British matron to study the female *Pediculus vestimenti*." He emphasizes the importance of another recently dug-out fact that lice, together with their eggs, can be destroyed in a moist temperature of 55° C. Fleas, bugs and itch mites are dealt with. He points out that it is quite probable that fleas play a part in the production of an infection formerly known as Ponos, a form of leishmaniasis found in Greece. He concludes his excellent, brief record of the medical entomology of Salonica by a suitable reference to the scarab beetle, whose diligence and unremitting labour as a scavenger he commends to the notice of all medical officers as an example.

THE PREPARATION OF DRUGS.

It is announced in the *New South Wales Government Gazette* of January 12, 1917, that the use of methylated spirits in the place of alcohol is permitted in the preparation of aconite, belladonna, ammoniated camphor and soap liniment. The substiution of cottonseed oil for olive oil or peanut oil is permitted in the preparation of *emplastrum ammoniaci cum hydrargyro, emplastrum hydrargyri, emplastrum picis, emplastrum plumbi, linimentum ammoniae, linimentum calcis, linimentum camphorae, sapo mollis, unguentum capsici, unguentum hydrargyri compositum, unguentum hydrargyri nitratis* and *unguentum resinae*. It is also announced that Australian wine containing not more than 16% by weight of ethylic alcohol may be used instead of sherry in the preparation of *vinum antimoniale, vinum colchici, vinum ipecacuanhae, vinum ferri* and *vinum quininae*. *Oleum eucalypti* is excepted from the provisions of the *Pure Food Act*, 1908, in so far as these require that it shall comply with the descriptions given of, and tests prescribed for it in the latest edition of the British Pharmacopœia.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(15) Quinine Amblyopia.

John E. Weeks records three cases of quinine amblyopia. The first patient was a woman of 51 years, who was operated upon for hæmorrhoids (*Archives of Ophthalmology*, July, 1916). It was desired to give her an enema of 20 grains of quinine to control pain. By mistake 315 grains of quinine were injected. Probably half was retained. The next morning the patient was quite blind, the pupils dilated and inactive, and the optic discs pale and the capillaries empty. The veins and arteries were small; the retina was œdematous, except at the fovea, where, however, there was no cherry red spot. This absence of red spot the author considers was due to the fact that the choroid was in a condition of ischæmia as well as the retina. Treatment consisted of copious saline enemata, glonoin, gr. $^1/_{100}$, every three hours to relieve vascular spasms; strychnine, gr. $^1/_{40}$, three times daily; and later digipuratum, gr. i., three times a day and digital massage of the eye. During the next 10 days the calibre of the vessels increased slightly, and the vision improved to $^{20}/_{30}$ in each eye. Iodide of strontium was ordered for its effect on exudation. Two months later the discs presented about $^3/_5$ normal capillarity, the arteries were half the normal size, the patient could read ordinary type. All through patient complained (even with almost normal vision) that she "could not see the light." This was due to a reduction of the light sense.

The second patient was a girl, aged 16, who was being treated for pneumonia by a salt of quinine, ethylhydrocuprin (optochin), in 0.5 gramme doses repeated every 8 hours until two gramme were taken. Four hours after the last dose the patient lost her sight. In eight days the patient began to distinguish light. When examined six days later the pupils reacted to light. Her vision was $^{20}/_{30}$ in both eyes. The optic discs were paler than usual; the veins were nearly normal, and the arteries one half normal size. After five months the vision was unchanged. Colour vision very indefinite. The third patient was seen first by Dr. Herman Knapp in 1877, when a little girl of 6 years. She was taking grs. x. of quinine by rectal suppository, and became blind. She was seen a year later by Knapp, who reported white discs and limited fields. The next years she again took quinine for malaria, and her vision was reduced to $^{20}/_{100}$ and $^{20}/_{200}$. She was green blind. The fields were much contracted in the right eye almost to the fixation point. The discs were white, and the vessels few and small. Two years later the vision improved to $^{20}/_{30}$. The author saw this patient in 1916. Vertical nystagmus was present in both eyes. The vision was $^{20}/_{30}$ and $^{20}/_{40}$. The discs were almost chalky white. The blood vessels were very few and much reduced. The vision has fallen remarkably little during the past 38 years. In the first week or ten days the recumbent position with the head low is advised.

(16) Cyst of the Iris.

In dealing with cysts of the iris, Sydney Stephenson gives the history of a case in a woman of 43 years, who had projecting from behind the pupillary edge of the lower temporal segment of the iris a single, smooth, rounded mass of dark brown colour (*Ophthalmoscope*, October, 1916). Her vision was normal. With transillumination the mass appeared to be dark. The growth was diagnosed to be a melanotic sarcoma, and the eye was removed. Microscopical examination proved the tumour to be a cyst formed by the separation of the uveal layers of the iris. Cysts of the iris have been found in the examination of specimens, but not many have been diagnosed previously. There are three instances, in addition to the case recorded, of a cyst being diagnosed as a sarcoma and the eye removed. The points in favour of a cyst would be bilaterality, multiplicity, mobility, tremulousness, notching and translucency. Exploratory puncture should be practised in every doubtful case. If not treated surgically they lead to cataract, glaucoma and loss of sight. Repeated punctures might be carried out, but other cysts may form. Iridectomy has been done. It is safe to assume that enucleation will be the ultimate fate in many cases.

(17) Improved Capsule Forceps for Intra-capsular Cataract Extraction.

Verhoeff has further modified Arnold Knapp's method of intra-capsular extraction (*Archives of Ophthalmology*, September, 1916). The latter grasped the capsule with Kalt forceps, moved it from side to side and then, after removing the forceps, expressed the lens, as in the Smith method. Verhoeff, instead of dislocating the lens, retained hold of it and gently pulled it out, making pressure on the cornea at the same time. The method is most successful in immature and hypermature cataracts, and in congenital cataracts after 30 years of age, where the capsule is thickened. An iridectomy is performed by no conjunctival flap. A special capsule forceps is used, provided with a step, which allows it to open only to a distance of 2.5 mm. and prevents it closing too tightly, so as to break the capsule. It has several other advantages over the Kalt forceps.

(18) Staphyloma Treated by Conjunctivo-Keratoplasty.

Partial staphyloma of the cornea, according to A. Knapp, when complicated by glaucoma and attacks of irido-cyclitis is one of the most difficult problems of the ophthalmic surgeon. (*Archives of Ophthalmology*, July, 1916). The sight may be lost from glaucoma, and the patient troubled with painful attacks, which, if relieved by perforation, may be followed by secondary infection and purulent irido-cyclitis. The best method of treatment is the excision of the staphyloma, the release of the adherent iris with iridectomy, and covering the defect with a conjunctival flap as recommended by Kuhnt. The latter has modified his procedure by excising only the superficial layers, and making a linear cut in the deeper layers with a knife. For older and extensive cases he resects a crescent from the periphery of the ectasis, sutures this to the adjoining cornea or sclera and covers it with a conjunctival flap.

(19) Melano-sarcoma of the Orbit Treated with Radium.

Edward B. Heckel's patient was a man of 48 years, who had his left eye removed in 1913 for sarcoma (*Archives of Ophthalmology*, September, 1916). Six months later the tumour recurred in the orbit, and was treated by bisecting it horizontally and inserting 53 mgr. of radium for 11½ hours. After seventeen days a mass was dissected out, radium inserted and left in for 13½ hours. In a few months the orbit appeared normal, but recurrence again appeared late in 1914, when pigmented material was curetted away and radium again applied for 12 hours. This had to be repeated in June, 1915, when 100 mgr. of radium was used. The orbit remained clear as late as April, 1916; but there was evidence of extensive involvement in the abdomen. In another case the author will employ the electric cautery knife as well as radium.

(20) Rhinosporidium of the Lachrymal Sac.

H. Kirkpatrick, of Madras, excised a large lachrymal sac, which, on examination, showed typical rhinosporidial cysts in the fresh specimen (*Ophthalmoscope*, September, 1916). A second operation had to be performed after two months, when a soft mass with creamy pus and jelly-like granulations was excised. The lachrymal groove was partly carious, and was scraped and irrigated with a solution of quinine (1 in 50). The use of quinine is to be emphasized. The condition is common in Southern India as a cause of growths in the naso-pharynx and nasal cavities. It has been described in conjunctival growths; but the present case is probably unique.

LARYNGOLOGY AND OTOLOGY.

(21) Otosclerosis.

J. S. Fraser and R. Muir have collaborated in an attempt to place the pathology of otosclerosis on a firm

basis (*Journ. Laryng., Rhin. and Otology*, November, 1916). They discuss the various theories concerning this condition. In the first place, it is held by some to be a congenital affection. The growth of the petrous part of the temporal bone is supposed to be affected by certain determinants in the patient's blood. The anomaly becomes manifest after puberty. The second theory supposes that otosclerosis is a chronic inflammatory process, spreading from the muco-periosteum of the middle ear. In the third place, there are otologists who regard otosclerosis as a primary disease of the bone, the infection coming by way of the blood-stream. If this theory were correct, there would be a close analogy between otosclerosis and osteomalacia. The last theory mentioned is that the condition is due to atrophic disturbance of the nature of a degenerative atrophic process. The authors describe in some detail the nature of the changes in the bone in cases observed by themselves, and illustrate the various points by means of a series of photographs. In interpreting the changes met with, they have occasion to refer to the development of the parts comprising the auditory organ. They record the opinion that a chronic infective process may invade the muco-pericsteum of the inner tympanic wall, infect the marrow spaces of the lamellar bone, and finally invade the lymph space lying between the cartilage bone and the lamellar bone. They discuss the cause of deafness in otosclerosis. Ankylosis of the stapes has probably something to do with the loss of hearing; but they cite cases in which there was marked deafness, but no ankylosis of the stapes. It is held by some that the deafness is in part due to changes in the labyrinthine fluid. Others have attempted to prove that it is referable to a process of degeneration of the cochlear ganglion, nerve and Corti's organ. The authors are inclined to the opinion that spongification of the labyrinth capsule is the true cause of the deafness in typical cases of otosclerosis. After dealing briefly with the production of tinnitus, they pass on to a discussion on the significance of paracusis. They refer to the stimulation theory, Politzer's theory that paracusis can be explained by the massage effect of the external noise on the more or less stiffened joints between the ossicles, Jenkins' theory that it is due to a change in the labyrinthine fluid, the theory that it is more apparent than real, and McBean's theory, which assumes that the sound-conducting mechanism is thrown out of gear when the stapedo-vestibular joint is ankylosed, and that under these conditions the membrane of the *foramen ovale*, which normally plays a passive rôle, takes on a more active function. The authors do not attempt to decide between these theories. After collecting all the evidence available, they arrive at the conclusion that some cases of otosclerosis are primary, and have the nature of a blood infection; others appear to be secondary, and follow the attacks of catarrhal or purulent *otitis media*, the infective process invading the labyrinth capsule at the anterior margin of the oval window. They hold that heredity plays an important part in this condition, notwithstanding the fact that the infective agent must gain access to the labyrinth either through the blood-stream or from the middle ear cleft. It has been proved that nerve deafness exists in atypical forms of otosclerosis, but the relationship between the bony changes and the nervous affection has not yet been ascertained.

(22) Laryngeal Tuberculosis.

S. Iglauer points out that sprays, inhalations, intralaryngeal injections, the application of lactic acid or formalin, combined with open-air treatment, rest and silence, have yielded but a small number of cures of laryngeal tuberculosis (*Laryngoscope*, October, 1916). Curettage has failed to improve the prognosis, and the results of tuberculin have been most disappointing. The author puts in a plea for the use of the electro-cautery in the treatment of this condition. Ruedi has treated 575 cases of laryngeal tuberculosis, using the cautery, the curette, or both. In 387 cases he was able to ascertain the fate of his patients. Complete healing was obtained in 35.9% after a period of between three months and five years from the time of the last application. Kreig claimed that he had cured 60 of 200 patients. It has been shown experimentally that the cautery transforms an indolent, avascular, tubercular lesion into an active vascular process, with a tendency toward enclosure by hyaline connective tissue. The author is of opinion that cautery should only be applied in carefully selected cases. When there is rapid lung destruction, marked fever, frequent hæmorrhages and severe cough the cautery should not be used. At times cauterization may check cough and relieve dysphagia. The author applies the cautery with suspension laryngoscopy. He points out that it is necessary to watch the patient carefully for a few days in case severe œdema sets in.

(23) Tracheo-bronchial Diphtheria.

H. L. Lynnal (*Layrngoscope*, October, 1916) holds the opinion that tracheo-bronchial diphtheria can be differentiated from broncho-pneumonia and other conditions in the majority of instances. He finds that this form of diphtheria occurs in about 3% of all cases requiring intubation. As a rule, the bacteriological examination in the early stages of this condition fails to reveal the diphtheria bacillus. The The clinical picture is stated to be quite distinct. The onset is seldom sudden, and the voice is not lost. There may be slight cough and stridor, but croup is not met with unless the larynx becomes involved. The chest may be barrel-shaped on one side only, when the bronchus on that side is obstructed. The respiratory murmur on the affected side is diminished or absent, and on the healthy side may be so harsh that it is mistaken for bronchial breathing. There is often hyper-resonance due to a large amount of emphysema. When the membrane forming in the trachea or bronchi acts like a valve, or becomes solid by the formation of blood clot, intense dyspnœa results. The author has been in the habit of passing a long intubation tube after the membrane has been expelled, in order to keep the passages patent. The differentiation between tracheo-bronchial diphtheria and broncho-pneumonia is based on the absence of constricted cough, the different character of the dyspnœa and the physical signs. Foreign bodies produce violent coughing, and the onset of the dyspnœa is sudden. The author favours the passage of the bronchoscope and the application of a continuous vacuum suction for the purpose of removing membrane. The vacuum should not exceed five inches. After the removal of the membrane the trachea or bronchi are sprayed with antitoxin. Antitoxin should be given early, and, as a rule, a dose of 10,000 units suffices. He prefers intravenous application if this is practicable and the patient is not prostrated.

(24) Complications of Intra-nasal Operations.

A series of brief records of complications following upon intra-nasal operations, and of the influence of nasal sinus infections upon the moral and legal responsibility of the patient has been communicated to the Laryngological Section of the Royal Society of Medicine, and is reproduced in the *Journal of Laryngology, Rhinology and Otology* of October, 1916. For obvious reasons the names of the authors are not given. An instance is cited illustrating the effect of sinus disease on the nervous system. A bank clerk was suffering from great depression and neurasthenia, with complete change of character. A delusional insanity developed, with strong suicidal impulses. The condition cleared up after an extensive suppurative lesion of the antra had been dealt with by operation. In another case, a lady in good social position was discovered to have committed a theft, and, on investigation, it was found that there was frontal sinus and antral suppuration. After successful operative treatment, no traces of the thieving impulses were detected. Another case of thieving was described in connection with pansinusitis. Another author has found that disease of the nasal accessory sinuses frequently produce headache, mental depression, slow cerebration, loss of memory, irritability of temper and moral perversion. In the second group of cases septic complications following intra-nasal operations are dealt with. These complications include osteomyelitis, septic pneumonia, meningitis, septicæmia, etc.

British Medical Association News.

SCIENTIFIC.

A clinical meeting of the New South Wales Branch was held in the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on November 10, 1916, Dr. Gordon Craig, the Vice-President, in the chair.

Dr. J. Goodwin Watson Hill read the notes on a case of *hydatidiform mole* (see page 53).

Dr. George Armstrong referred to the case of a young woman who had been under the treatment of an abortionist. After a few days she had passed a lot of grape-like material. The nurse incited the patient to bear down and she lost so much blood that when the speaker saw her she was practically *in extremis*. He had treated this woman in the same way as Dr. Hill had treated his patient, but he had used a blunt curette. He maintained that he was better with a curette than with his finger. In regard to the risk of malignant disease supervening he advocated a very prolonged control of the patient.

Dr. D. Kelly raised the question whether hysterectomy should not have been carried out in a patient already 55 years of age on account of the chance of malignancy supervening. He considered that the risk of leaving the uterus was too great.

Dr. R. Gordon Craig referred to the fact that he had been called in in consultation with Dr. Hill. He agreed that Dr. Kelly's suggestion was theoretically sound, but the patient was in such an extreme condition that he was convinced that the proper thing to have done was to empty the uterus. There were obvious signs of failing circulation, and he was sure that she would not have survived the radical operation. He suggested that perhaps hysterectomy might be performed at a later date.

In his reply, Dr. Hill stated that he would keep his patient under very close observation for several months.

Dr. E. H. Binney read a paper dealing with the work of a hospital surgeon. He said that he was referring only to the position of an honorary surgeon in charge of beds in a great metropolitan hospital. He would not for the present touch the ethical side of the matter, nor the question of the division of labour among the members of the honorary staff, a much vexed question. In the first place he proposed to deal with the clinical side of a surgeon's work. The cases under his care fell into two classes: there were the cases of accident or urgent illness, and there were those cases which had been referred from the out-patient department or from the private medical attendant. In regard to the first class, the honorary surgeon was generally relieved of the immediate attendance by the kindness and enthusiasm of his honorary assistant surgeon. If the hour were awkward, he was sometimes reluctant to attend these cases, but he was always notified. The speaker held that a full surgeon was at liberty to relegate any or all of his urgent work, without neglect, to his assistant, provided that he accepted at the same time the responsibility and charge of the case. He recognized that this was perhaps an ethical question, and that its discussion might occupy the attention of the members of the hospital staff.

Dr. Binney proceeded to deal specifically with the various groups of cases under the care of a surgeon. He stated that head injuries were the bugbear of the new resident, and were frequent subjects of inquests and paragraphs in the evening papers under the heading: "Drunk or dying." The first-aid medical attendance was generally given in the casualty room and the applicants for admission were many. In the Sydney Hospital a system of admission for 24 hours' observation had been adopted; yet in spite of all this a few patients might be discharged and die in the park or in a police cell, and the coroner might be unkind. The honorary surgeon would find himself called in early in consultation, usually with the object of supporting the resident medical officer in discharging the patient, or in deciding whether any operative treatment was necessary. Their experience on this point had taught them that in the absence of an obvious depressed fracture of the skull trephining was usually confined to cases with symptoms of definite middle meningeal hæmorrhage. These symptoms were:—(1) the history of an apparently slight injury with stunning; (2) recovery with complete consciousness; and (3) lapse into unconsciousness later, with marked slowing of the pulse, and other signs of cerebral compression. These patients were watched carefully, and hourly pulse readings taken. In the mean time the preparations for trephining were gone on with. Dr. Binney confessed that they had not adopted a recent American suggestion of attempting to secure the middle meningeal artery before it entered the *foramen spinosum*. This proposal had been made in all seriousness as a preliminary to be carried out in a cottage or police cell before the major trephining. The limited use of trephining differed widely from the practice at the front according to the accounts of some of the recently-returned surgeons. He hoped that some of the members present would speak of the results obtained when trephining was carried out for conditions which were not usually treated in this manner.

Cases of head injuries not treated by trephining were watched carefully, and dealt with on ordinary lines. Lumbar puncture often gave evidence of intra-cranial hæmorrhage and had become part of the routine in diagnosis.

Turning to spinal and pelvic injuries, Dr. Binney had little to say concerning the diagnosis and treatment. Improvement had been noted, both after laminectomy and expectant treatment in cases of spinal injuries. The interest of pelvic injuries had been centred chiefly in the surgery of the injured bladder or urethra. Both classes of injury were of importance from a medical-legal point of view.

In the next place he dealt with fractures. In patients admitted into the wards of a hospital the fracture was almost invariably situated in the lower limb. In the absence of serious complications, fractures of the upper limb, chest and jaw were dealt with in the casualty and out-door departments. Hitherto the honorary surgeon had taken but a limited interest in his fracture cases. Several factors, however, had contributed to a revival of interest in the subject during recent years. These factors included (1) the open method of treatment and plating, and other forms of operative treatment; (2) new splitting and other methods originated during the war; and (3) the provisions of the Employer's Liability and other Acts, the co-operation of unions and of individuals in actions for compensation for negligent treatment, and the importunity of employers for the quick recovery of their employees. The attention of the profession had thus been drawn to fractures and their treatment, and surgeons had been led to review their past treatment, and to inspect the splint room and stock of appliances. He did not think that any of the members of the staff could feel satisfied with the results and methods employed. The ordinary extension by means of a long Liston and body sheet was unsatisfactory for thigh fractures; the wooden back splint invariably used for fractured legs left much to be desired; Pott's fracture resulted too frequently in valgus deformity and prolonged, if not permanent, disability of the patient. He considered that this was a most important part of their work, and that from an economic standpoint it had a great significance, seeing that it concerned the young, active, and at the present time military-aged part of the community. He considered that the question would have a definite bearing on national insurance, and would influence generally the proportion of the physically fit of the population.

He confessed that he was a disciple of Colonel Robert Jones. He had been fortunate enough to enjoy his tuition. Colonel Jones' recent writings could not fail to attract many readers. The plating of simple fractures frequently led to brilliant immediate results, and ensured that the fragments were held in apposition, and that bony union subsequently resulted. In many cases, in his experience the majority, evidence of the presence of a foreign body was present. Loosening at the screw-holes was inevitable, and the plate had to be removed. Compound fractures did not lend themselves to plating, however perfect the system of asepsis adopted might be, even in civil practice. Free drainage being essential, primary wound union became impossible. He had recently heard an experienced returned surgeon say that he would never be induced to plate a compound fracture in war time.

The use of autogenous bone grafts and intra-medullary pegs had been a distinct advance in the mechanical operative treatment of fractures. Dr. Binney had recently ob-

tained a good result in the treatment of a compound spinal fracture of the tibia after manipulating the broken ends of the bone into position while the patient was under an anæsthetic, replacing loose fragments, and enveloping the site of the fracture with a sheet of *fascia* from the thigh in order to limit callus formation. This method had been advocated by Colonel Jones.

The mention of Jones's name reminded him of his long-timed advocacy of Thomas's splint, particularly the knee splint for fractured femora. This splint had been modified by Hodgen, and with the Hodgen's splint, which was based on the same principle, the *point d'appui* was the pelvic girdle, and extension was applied from this position. The fact that it could be converted with ease into an ambulatory appliance made it attractive. He remembered over 20 years ago, when he was house-surgeon to Sir Alexander McCormick, being advised to put fractured femora in Thomas's knee splint. Modifications had been adopted in certain fractures of the leg; the ring was brought against the tubercle of the tibia and encircled the head, and extension was applied from this point. In a similar manner the ring was applied against the neck of the scapula in the axilla in shoulder cases. He was inclined to call all these methods "war developments." The modified splint had the advantage of lightness, and could be made from ordinary iron rods or wire.

Surgeons could not help being impressed with the want of progress in this direction in hospital practice, as compared with improvements in other departments. The fault lay with the staff. Dr. Binney suggested that perhaps the war might stimulate them to greater activity.

Apart from accidents, the emergency work on the surgical side of a large general hospital was considerable. Individual cases of extreme rarity and unusual successes had been reported. They had still to wait for the time when a surgeon reported a series of unsuccessful cases. In spite of this, the thought had often struck him, and would have struck anyone else who had had much experience of the routine of hospital work, that the proportion of cases treated urgently, as compared with those treated more deliberately, appeared to be somewhat high. It might be said that temporizing, letting the case settle down, and masterful inactivity had been responsible for many failures. On the other hand it was often found that the surgeon gave unnecessary alarm to patients and their friends, perhaps thereby causing serious inconvenience by "rushed" surgical interference in cases in which the findings proved that temporizing might have been more in the patient's interest. In attempting to find a cause for this state of affairs he asked himself whether it was affected by their teaching. He was inclined to the opinion that the arrangements of a general hospital, the attitude of the resident staff, which was composed of men until recently their pupils, and last but not least, some of the medical literature from "across the water" might account for it. He was afraid that the literature referred to at times strongly advocated the "do it now" or "right here" or "quick in and out" policy. He thought that more than one of the world tourists had been struck by the careful and attentive analysis of the conditions of a case by British surgeons before an operation is undertaken, as compared with those elsewhere.

Dr. Binney next spoke of the "acute abdomen." This condition was generally diagnosed by the resident medical officer, who prepared the patient for an abdominal section. The surgeon frequently did not palpitate the abdomen until the patient was on the table. The operation, however, was proceeded with. A diseased or even a normal appendix was removed, perhaps not a bad thing for the patient if there was nothing else the matter. But these patients were the ones who, at times, after more deliberate investigation, were found to have renal calculi, phleboliths, cholecystitis or a duodenal ulcer. These considerations suggested the question: "Does the patient who comes under our care in the wards of a general hospital get a fair deal? Does he get our best? Does he get as good as our private patients?" They were as a rule there through no fault of their own, the victims of misfortune. Dr. Binney stated that he was presuming that they were at that Utopian stage when hospital abuse was no more. There were still unsatisfactory results, and he wished to enquire where the blame lay. Could this state of things be improved? He considered that the view held and taught by many that pure mechanical operation was of prime importance might be productive of bad effects. This view had been condoned, and the management of the hospital had encouraged it by the hurried admission of patients for operation, the surgeon frequently being introduced to the patient as he was inhaling the anæsthetic on the table. The experience at the Sydney Hospital had shown the usual number of "acute abdomens," with a varying proportion of successes. It was possible that other conditions had been discovered at other hospitals in the patients from whom they had removed the appendix. The surgeons at the Sydney Hospital had made the same experience, and so honours were easy. They could both blame the resident surgeon or the outside practitioner.

Of abdominal catastrophes, apart from appendix cases, he supposed the duodenial ulcer was the most common. He intentionally omitted ruptured ectopic gestation as belonging to higher places. The surgeon was only called in to treat these cases where the patients came along in the hurried manner already mentioned, and the operator when looking for appendicitis found free blood on opening the peritoneum. In the last number of *The Sydney University Medical Journal* his old colleague since resident days, Dr. Corlette, had written on this subject, and though he was disinclined to agree with all that was contained in the article, he could not support his contention too strongly that the simplest means for dealing with a case of perforation were the best, and that this was one of the emergency operations that every practitioner in the country should be prepared to undertake. The recovery was the rule in these cases, and those patients did best who were opened and drained without a gastro-enterostomy. Dr. Binney had not found it necessary to do gastro-enterostomy subsequently in any of these cases, and he had discovered that his experience was shared by observers elsewhere.

Before concluding, he expressed regret that time did not allow him to comment on those men who were referred to them for operation who had been declared ineligible for military service, nor to deal with cases of unrecognizable varicoceles, hernias, and hydroceles which were sent along by those in authority. He wished to advocate on the basis of the evidence adduced the improvement in their methods in the following directions:—(1) More deliberate observation of cases, and the avoidance of "rushed" operations; (2) prompt notification to the honorary surgeon, and insistence on constant attention in all accident cases, especially fractures; and (3) avoidance of prolonged convalescence in acute and accident cases, thereby extending bed accommodation and hospital usefulness.

Dr. E. P. Sandes congratulated Dr. Binney on the courageous manner in which he had tackled his subject. He recognized that surgeons not infrequently made mistakes in urgent cases and in fracture cases. Many operations were undertaken which would be left undone, had the surgeon taken more time to consider. The speaker referred to a case of a man in the lower part of whose abdomen a very hard lump had been found, and a volvulus diagnosed. The abdomen was opened, and the small intestine was found to be quite normal save for a constriction. The case was obviously one of enterospasm. In another case a perforated appendix was diagnosed, but at the operation it was found to be normal, and a calculus was discovered in the ureter. A patient was operated on for alleged hæmorrhoids. A soft swelling was found in the rectum from which the hæmorrhage had arisen. This swelling was syphilitic in origin, and the patient was suffering at the same time from locomotor ataxia.

Dr. Sandes regarded the unsatisfactory results which at times were noted in fracture cases as attributable to the unequal distribution of these cases among the hospital surgeons. There was a lack of interest on the part of students and residents in this work. He suggested as a remedy that special fracture wards should be set up in hospitals, and he expressed the view that the experience of the present war would lead surgeons to adopt this course. It was often necessary to set up complicated apparatus in order to obtain good results.

Dr. George Armstrong expressed the hope that the senior men on the hospital staffs would meet together and consult

about their cases. This used to be done in the olden days. The speaker refused to be rushed by his resident medical officers. He referred to the swelling diagnosed as a huge ovarian cyst, which disappeared entirely after a catheter had been passed. There were very few urgent cases in pelvic surgery. Ectopic gestation and hæmorrhage were undoubtedly urgent conditions, while nearly every other could be dealt with deliberately.

Dr. Archie Aspinall agreed with Dr. Sandes that the setting up of fracture wards in hospitals would be advantageous. This would overcome the difficulty connected with the elaborate apparatus necessary for many of these cases. He thought that the chief difficulty was met with in the out-patient or casualty departments. A scheme was needed by means of which patients with fractures would be placed under the care of a responsible surgeon, who would control the progress by radiography and other means.

Dr. W. F. Litchfield thought that the general practitioner should know what was going on in hospitals. He regretted that many hospital surgeons do not take the trouble to follow the practice of their colleagues in the same hospital, or in other hospitals. He supported Dr. Sandes's proposal of having special fracture wards.

Dr. R. Gordon Craig considered that it was very wise of Dr. Binney to have brought this matter up for discussion. He spoke strongly in favour of the development of bone surgery as a speciality, and thought that there was need of the organization of the treatment of fractures in general hospitals. Fractures of the upper arm were extremely common, and were the least satisfactory of all. There was often a loss of the power of supination due to the way in which the fractures were put up. Colonel Robert Jones had advised that these fractures should be put up in complete supination. He doubted if anyone could claim that they got ideal results in fractures of the femur by the use of the long Liston splint. He referred in appreciative terms to Dr. Hamilton Russell's contribution to this subject, which had been published in *The Medical Journal of Australia* (August 12, 1916, page 107 *et. seq.*).

In his reply, Dr. Binney thanked the various speakers for the kindly way in which they had taken his remarks. Supplementing Dr. Sandes's remarks, he referred to a case of a locomotor ataxia patient, whose abdomen was opened for the removal of gall stones; the symptoms were really due to a gastric crisis. He mentioned, in conclusion, that there was a fracture ward in the Sydney Hospital.

Dr. Archie Aspinall continued the account of a case of fracture of the pelvis with complete *retro-pubic rupture of the urethra* (see *The Medical Journal of Australia*, August 28, 1915). The patient had been at Rookwood up to the latter half of July, 1916. He then returned to the Sydney Hospital able to walk about. At that time three of the four discharging sinuses had closed. The fourth sinus was supra-pubic, and urine escaped through it. A permanent catheter was being worn. On July 25, 1916, the patient was anæsthetised by Dr. Matheson, and Dr. Aspinall made an elliptical incision around the scar tissue and the fistulous group. The scar tissue was dissected off the deeper tissues. The dissection was carried along the track of the fistula, and all the infiltrated tissue was dissected off the bladder. The opening into the bladder was closed by a purse-string chromic gut suture and a continuous catgut suture. Fishing gut was used for the skin and deep sutures of the parietes. A small drainage tube was employed. At first some urine escaped through the supra-pubic wound, but by the end of August the wound had healed, and the patient was able to retain his urine for from two to three hours. He was allowed to return to his home. The improvement continued. On October 26 he wrote to Dr. Aspinall, informing him that he could retain his urine for from three to four hours, and was able to get about quite well. He was anxious to know if his services could be utilized in the Australian Army Medical Corps. The members had an opportunity of examining him, and satisfied themselves that the healing had been complete, and that the functional results were good.

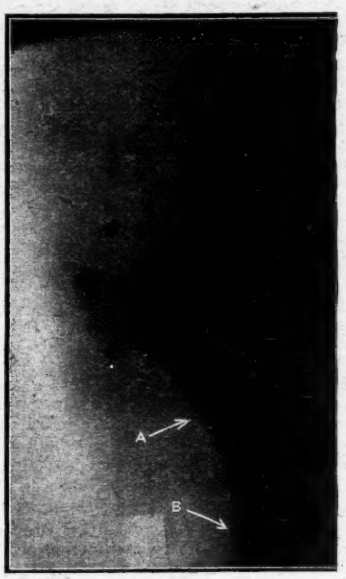
Dr. Aspinall also gave the details of a case of an *osteoma* attached at the lower third of the femur, and demonstrated the radiogram of the limb. The patient was a seaman, aged 22 years, who was admitted into the Sydney Hospital on October 28, 1916. He had been rejected by the military authorities on account of a tumour at the back of the right thigh. He had noticed the growth for ten years. He had received a kick on the back of the thigh from a horse, and three years later a swelling appeared. The patient was not inconvenienced in any way by the growth, and suffered no pain or impairment of movement. The mass had not increased in size since he had first noticed it. On examination, it was found to be large, hard, and immovable, and to be attached to the femur in its lower third. The skin was not adherent, and there was neither redness nor tenderness. A skiagram was taken, and the diagnosis of osteoma of the femur was confirmed. The tumour was removed by chiselling through its base. The accompanying skiagrams illustrate the appearance before removal.

Skiagram showing a Wide Separation of the Pubic Bones at the Symphysis, with elevation of the left side of the pelvis. The original fractures of the pubis and ischium cannot be made out. The arrows point to the widely separated pubic bones.

Antero-Posterior View.

Dr. J. G. Edwards passed round a series of radiograms depicting osteophitic spurs and osteomata. He dealt with the common sites of origin of these bony tumours.

Dr. R. Gordon Craig held the view that there was a common pathology in all these tumours. Macewan had studied the growing horns of stags. These animals, as was well known, cast their antlers, and fresh antlers grew rapidly. After injuries to bones or operative interference osteophytes were thrown out, and often escaped the barrier of the periosteum. In Dr. Aspinall's case he assumed that the cartilaginous cells had been formed as the result of the trauma, and that new bone formation had taken place beyond the limitation of the periosteum. The growth probably continued until a condition of physiological satisfaction was established.



Lateral View (see page 62).
The upper arrow indicates the origin from upper portion of the inner supracondylar line. The lower arrow points to the popliteal surface of the femur.

Dr. D. Kelly demonstrated a case of *Hanot's disease* (hypertropic cirrhosis of the liver). The patient noticed a swelling of the abdomen 5½ years before. She described the swelling as a sausage-shaped lump, situated in the middle line above the umbilicus. The lump could be pushed to the left side. There was very slight pain. She was told that the swelling was a rupture, and paid little attention to it.

She stated that the lump increased in size 4½ years later, and that the increase had continued ever since. There was no pain until about two months ago, when she complained of an ache in her left side. For six months she had felt sleepy and disinclined for work, and the colour of her skin had been becoming browner. Dr. Kelly pointed out that there was marked pigmentation of the skin and chronic icterus. The heart and lungs were normal. A large tumour could be felt on the left side extending from the ribs to three inches below the umbilicus and two inches to the right of the middle lung. Two notches could be felt on the anterior border. There was tenderness at one spot below the ribs. The mass moved slightly on respiration. The liver was markedly large, and its lower border could be felt three inches below the costal margin. The pelvic organs were normal. There was no abnormal constituents discovered in the urine. There was no loss of weight. The patient's family history was good. She had been married for 19 years, and had six living children. She had had two premature births, one at six months 17 years before, and one at eight months 13 years before. She had also had three miscarriages. She had never taken alcohol, and there was no history of lues, but five years before she had suffered from sore throat for a few months. The only change in the blood was a leucopenia. There was considerable delay in carrying out a Wassermann reaction on account of a butcher's strike. When the test was carried out it proved to be positive. The abdomen was opened on September 21, 1916, for the purpose of removing the spleen. It was found that the spleen was enormously enlarged, and it, together with the liver, appeared to occupy nearly the whole of the abdominal cavity. There were several cirrhotic patches in the spleen, and adhesions between the omentum and this organ. The enormous size of the spleen and the presence of these extensive adhesions rendered the operation almost impossible. It was therefore abandoned. Two days later the patient was treated with iodide of potash (gm. ii three times a day) and *hydrargyrum cum creta* (gm. 0.12 twice a day). This treatment was being continued. A dose of 0.6 gramme of neosalvarsan was given on September 29, and a second similar dose ten days dater. The tumour appeared to be diminishing in size. On October 31, 1916, the Wassermann reaction was still positive. The husband's blood was also tested. The test was negative on that date, but Dr. Burton Bradley reported that it was partially positive subsequently. Dr. Kelly came to the conclusion that the case was one of Hanot's disease, on account of the chronic icterus, the absence of anæmia, and the great enlargement of the spleen and liver. Had the changes been purely syphilitic, some anæmia and no icterus would have been expected.

Dr. R. Gordon Craig described an unique injury to the elbow joint of a farmer, aged 50 years. The man had been ploughing three weeks before, when the plough met with an obstacle, and his arm became jammed in a flexed position. When he consulted Dr. Craig he complained of inability to straighten the elbow beyond a certain angle. An X-ray picture was taken, and a spur of bone arising from the olecranon was seen lying loose in the olecranon fossa. It was probable that this spur had been fractured close to its base at the time of the injury. In discussing the pathology of the condition the speaker likened it to a *myositis ossificans*. He was opposed to the suggestion of any operative interference.

MEDICO-ETHICAL.

The Expulsion of a Member.

A special meeting of the Council of the Queensland Branch was held on December 22, 1916. It was unanimously resolved that Dr. ——— be expelled from the Branch on the ground that he had wilfully and persistently refused to comply with the regulations of the Queensland Branch of the British Medical Association in accepting and holding an appointment with ———.

Dr. ——— had applied in April, 1916, to be elected a member of the Queensland Branch. He had been a medical officer to the ——— Friendly Society in contravention of the rules of the Branch. In making the application he stated that he had accepted this appointment because he was hard up. He had given up the appointment, and desired to become a member of the British Medical Association. The consideration of his application was deferred for three months, and on August 18, 1916, he was duly elected a member of the Branch. At a later date the Council became aware that he had again accepted a position with the same Friendly Society. A letter was sent to him asking him to tender his resignation as a member of the Branch. No reply was received, and consequently a second letter was sent informing him that unless his resignation was received within a given time the Council would consider the advisability of removing his name from the list of members. He did not reply to this letter. On November 21, 1916, he was informed by letter that a special meeting of the Council had been convened at the request of two members for the purpose of considering whether any action could be taken by the Council. He was advised to attend this meeting to explain his conduct.

THE CONFERENCE OF SCHOOL MEDICAL OFFICERS.

The first Conference of School Medical Officers of Australasia was opened in Sydney by the Minister of Public Instruction on December 18, 1916. The conference was continued through four morning sessions, and was closed on December 21, 1916. The representatives of the School Medical Services were Dr. Jane Greig (Victoria), Dr. Gertrude Halley (South Australia), Dr. Elizabeth Macdonald (New Zealand), Dr. Ethel Hawkins (Tasmania) and Dr. C. S. Willis (New South Wales). In addition, the Conference was attended by P. Board, Esq., C.M.G., Director of Education of New South Wales, and Drs. G. C. Berkley (Dentist

attached to the Travelling Hospital), S. C. Bevan, I. Coghlan, M. Edelsten, C. Fallon, L. O. S. Poidevin, W. F. Quaife, A. Robertson, C. P. Stewart, G. Vale, C. A. Verco, J. E. Webb, and L. Weir, all of whom are attached to the New South Wales Department of Public Instruction.

In opening the Conference the Minister said that it was recognized among education authorities that the care of the health of the children was just as important as the care of their minds, and that it was necessary to educate them to look after their own health. He hailed with satisfaction a conference that was to deal with the standardization of defects found in children. He extended a hearty welcome to the members of the Conference who had come from other States.

On the motion of Dr. Halley, which was seconded by Dr. Greig, it was resolved that Dr. Willis take the chair.

Dental Defects.

Dr. Bevan proposed and Dr. Robertson seconded:—

That this Conference confirms the standard of notification at present adopted by all States represented in the matter of notifying carious second teeth.

The presence of one carious permanent tooth is notified as a dental defect in Victoria, South Australia and New South Wales.

The motion was carried, some of the visiting members refraining from voting.

It was pointed out that if each member from New South Wales had the right to move a resolution and to vote, the representatives of other States might find themselves in a minority. It was therefore agreed that there should be one representative for each State, and that the other members attending the Conference should have the right to speak, but not to vote or move a resolution. Dr. C. P. Stewart was elected representative for New South Wales.

Dr. Stewart moved and Dr. Greig seconded:—

That all children with six or more carious first teeth be treated as defective and notified, and that children with fewer than six carious first teeth be notified if the surrounding circumstances warrant it, such as irregularity and position.

In seconding the motion Dr. Greig pointed out that she accepted this standard with some misgivings, and was prepared to act on it as long as no dental clinics were provided in Victoria. The motion was carried.

It was moved by Dr. Greig and seconded by Dr. Halley:—

That "other defects" include pyorrhœa, abscess, marked irregularity affecting permanent teeth, excessive tartar, and that these conditions be notified.

A discussion ensued, and the motion was carried.

Naso-pharyngeal Defects.

Some discussion took place on the advisability of regarding mouth breathing as a defect requiring notification. The opinion was expressed that, in the absence of any definite organic cause, it would suffice if the school medical officer were to record the presence of mouth breathing, without notifying it. No resolution was passed

Dr. Halley moved:—

That all nasal defects, other than acute catarrh, be notified and included in statistics.

The motion was seconded by Dr. Stewart. Dr. Greig pointed out that in Victoria nasal defects were not differentiated sharply from those of the nose and throat, and that in all statistical returns the defects were classified under this heading. The motion was carried.

Dr. Halley moved and Dr. Hawkins seconded:—

That all cases of adenoids giving rise to obstruction of breathing, ear conditions or chronic catarrh be notified.

During the course of the discussion the question was raised whether a physical examination of the posterior nares was necessary to justify the diagnosis of adenoid vegetations. The majority of medical officers did not carry out any inspection or palpation. The motion was carried.

It was moved by Dr. Greig and seconded by Dr. Halley:—

That tonsils large enough to reach half way across to the uvula or more and diseased tonsils be notified.

Enlarged tonsils smaller than that be notified only if associated with symptoms, such as defective hearing and mouth breathing.

Dr. Halley was of opinion that the size of the tonsil was not a guide to the necessity for its removal, but was satisfied to accept the motion, inasmuch as all diseased tonsils would be notified. The motion was carried.

Dr. Halley moved:—

That all cases of cleft palate, including that of soft palate, and excluding divided uvula, be notified.

She pointed out that she was in the habit of notifying cleft palate in South Australia, and regarded the defect as a serious one. Dr. Macdonald stated that this condition was occasionally notified in New Zealand, and Dr. Greig reported that it was always notified in Victoria. She agreed with Dr. Halley that the defect was of importance. Dr. Stewart stated that it was not notified in New South Wales. The motion was formulated as a compromise, and, after it had been seconded by Dr. Greig, was carried.

In connexion with chronic pharyngitis, several of the speakers expressed the opinion that it was almost impossible to fix a standard for this condition. Drs. Quaife, Stewart, Verco and Webb found that the diagnosis was extremely difficult to make during the course of the ordinary medical inspection. Dr. Greig stated that, in the majority of cases, the patients applied to private practitioners for treatment, and that the school medical officer did not handle them. She moved:—

That marked cases of chronic pharyngitis, if not due to other notifiable conditions, be notified.

The motion was seconded by Dr. Halley and carried.

In proposing the following motion, Dr. Greig stated that in Victoria all cases of acute laryngitis were notified to the parent immediately after the children had been examined:—

That all chronic laryngeal conditions affecting health or speech be notified.

Dr. Halley seconded the motion.

Dr. Willis stated that the parents were not informed of acute laryngeal affections discovered at the inspection in New South Wales in the manner described by Dr. Greig. The motion was carried.

It was moved by Dr. Stewart and seconded by Dr. Macdonald:—

That glands of the neck only be notified if due to tubercular infections, if abscessed or appear about to be abscessed or so large as to cause or be likely to cause further trouble.

The motion was carried.

Defects of Hearing.

Dr. Stewart moved and Dr. Halley seconded:—

That hearing be recorded in tenths.

Dr. Halley and Dr. Greig were markedly in favour of employing whisper tests as the only reliable and practical method of determining when a child's hearing was so defective that its education in school was interfered with. They protested against the employment of the watch test, on account of its unreliability, which was due partly to the variability of the loudness of the tick and partly to the fact that children frequently stated that they heard the watch when more careful examination demonstrated that they could not possibly have done so.

Dr. Willis pointed out that the watch test was used in New South Wales, and defended this practice. He stated that the conditions under which the work was carried out would have to be accepted, provided that the method of recording the defects in any one State were uniform. The motion was carried.

Dr. Greig thereupon moved:—

That hearing $^5/_{10}$ or worse be notified, and slighter degrees be notified if associated with other conditions.

She suggested that $^5/_{10}$ allowed of a sufficient margin. The conditions under which the hearing tests were conducted rendered it necessary to provide a wide margin. She thought that when statistics were published it would be advisable to explain the conditions under which the defects were recorded, in order that the authorities in other

countries might utilize this information in comparing the results of the inspection.

Dr. Halley considered that $^{5}/_{10}$ was too low. She held that hearing for educational purposes was defective, when the child failed to distinguish sounds at a distance greater than $^{7}/_{10}$ of the minimum distance at which a normal child could hear them.

Dr. Hawkins stated that she was prepared to accept $^{5}/_{10}$ as the minimum, and therefore seconded the motion. The members accepted it.

The subject of earache was discussed. Dr. Halley held that, as earache was a symptom and not a disease, notification was unnecessary. It was pointed out by Dr. Greig that the recording of negative proposals was undesirable, and the matter was therefore dropped.

It was moved by Dr. Greig, seconded by Dr. Halley, and resolved:—

That all cases of discharge be notified.

Ophthalmic Defects.

Dr. Halley moved:—

That children showing visual defects of $^{6}/_{12}$ or over in one or both eyes be notified. Vision better than $^{6}/_{12}$ only to be notified if symptoms of eye strain are present.

Dr. Macdonald called attention to the fact that a vision of $^{6}/_{9}$ was regarded as defective in New Zealand, but that all acuter vision escaped notification, save in those cases in which there was headache, nephritis, etc.

Dr. Hawkins reported that the same standard was adopted in Tasmania, and Dr. Stewart stated that this applied also to New South Wales.

Dr. Greig said that in Victoria a different standard was accepted for children under ten and for those over ten. She referred to the carrying out of the tests, and expressed disapproval of this being done by teachers or senior children. Dr. Halley held that no teacher should be allowed to test visual acuity. In South Australia she insisted on doing this work herself, and she held that the results were quite untrustworthy when the examination was entrusted to untrained persons.

Drs. Bevan, Quaife and Stewart described the practice in New South Wales, and dissented from the views expressed by Dr. Halley. The motion, which was seconded by Dr. Greig, was carried.

Dr. Greig insisted that a standard of $^{6}/_{9}$ was necessary for high school pupils. She was not prepared to accept a lower standard. Dr. Willis could not see his way to adopt two standards for New South Wales.

It was moved by Dr. Halley and seconded by Dr. Greig, and resolved:—

That all cases of squint be notified.

It was moved by Dr. Macdonald, seconded by Dr. Halley, and resolved:—

That other defects should be ophthalmia, epiphora, affections of the globe and marked blepharitis, and that these be notified.

Defects of the Respiratory Organs.

Dr. Greig moved:—

That all defects found in lungs, except acute catarrhal conditions, be notified.

Dr. Halley protested against the practice of examining children's chests without undressing the children. She regarded that the examination conducted under these conditions was a mere pretence. Physical signs in the lungs or heart could not be recognized through clothing. She seconded the motion, which was carried.

Cardiac Defects.

Dr. Greig moved and Dr. Halley seconded:—

That all cases of organic heart disease be notified.

Dr. Willis stated that in New South Wales the examination of the heart was only undertaken when there was reason to suspect some cardiac affection. Referring to what had been said in regard to the undressing of children, he admitted that in New South Wales the children were not undressed as a rule. The percentage of those undressed was probably less than one. He had discussed the matter with the Director of Education two years before, and had pointed out that the parents had manifested a very strong objection to the undressing of their children. It was decided at that time that it be left to the discretion of medical officers whether the children should be undressed or not for the purpose of medical inspection.

Dr. Macdonald referred to the absurdity of registering the frequency of defects of the heart, of the lungs and of the back if the examination were carried out through the children's clothes.

Dr. Halley had found that the parents in South Australia raised no objection to the practice of undressing the children, and, even if they did, she would not consent to this form of practice to suit the public taste. The motion was carried.

Anæmia.

It was moved by Dr. Stewart:—

That when malnutrition and anæmia are marked the case be notified as of "defective general health." Either condition separately only to be notified if very marked.

Dr. Greig pointed out that the diagnosis of anæmia should be based on blood counts. She recognized that there was a certain amount of difficulty associated with the procedure of collecting a sample of blood, and that opposition would be raised in many cases by parents.

Dr. Halley thought that it was not practicable to require a blood count to be made by the medical inspector, and recognized that there was considerable difficulty connected with the diagnosis of anæmia.

Dr. Macdonald held the view that, for the purposes of the inspection of school children, it was sufficient to recognize conditions in which a general lowering of the health was manifest.

Dr. Willis regarded the diagnosis of anæmia as difficult, and stated that it was at times impossible to diagnose and test anæmia accurately in ordinary medical inspections.

The motion was seconded by Dr. Macdonald, and carried.

Skin Defects.

Dr. Greig moved:—

That all skin conditions be notified.

Each representative gave an account of the practice obtaining in the State represented by her or him. It was pointed out that children could be excluded from school if suffering from a communicable disease, and that it was therefore necessary to notify all skin defects. The motion was seconded by Dr. Hawkins and carried.

Pediculosis.

It was moved by Dr. Halley and seconded by Dr. Greig, and resolved:—

That all cases of infection of the hair, with pediculi or nits, be notified.

Orthopædic Defects.

Dr. Macdonald called attention to the importance of examing the backs of children, as well as their shoulders and other joints, for physical defects or deformities. The matter had attracted much attention in New Zealand. Dr. Macdonald attached much importance to the discovery of functional and organic curvatures and other deformities. She held that physical training was quite essential for the purpose of keeping the children in good health, and in lessening the incidence of functional scoliosis. Dr. Greig agreed with her New Zealand colleague in regard to the necessity for seeking defects of this nature, and for applying general means of amelioration. She therefore moved:—

That marked cases of lateral curvature, round shoulders and deformed chests be notified to parents and teachers.

In seconding the motion, Dr. Halley expressed the view that physical training was necessary in the interests of the children of the State. The motion was carried.

General.

Dr. Halley expressed regret that the subject of mental defects, which had been included in the agenda paper, had been left until it was too late to deal with them. It was

pointed out that no motions would be accepted the carrying out of which would involve the various ministries in fresh expenditure. This limitation had certainly not been recognized by the Minister in South Australia, who had been very anxious that a full discussion should have been organized on this most important subject. The proper handling of mentally defective children was of great importance, both to the affected children and to the mentally normal children. She also expressed disappointment that the Conference should have limited its deliberations to the standardization of defects to the exclusion of all discussion concerning the methods of examination. It was desirable that uniformity should be arrived at in carrying out the examination of school children, and she had hoped that the Conference would have fixed standards of method as well as standards of defects.

It was resolved on the motion of Dr. Greig:—

That urgent conditions be immediately notified to the parents.

Control of Infective Diseases in Schools.

Dr. Gertrude Halley sought a definite expression of opinion from the Conference in regard to the methods to be adopted to control infective diseases in schools. She pointed out that in South Australia difficulties had arisen owing to the inadequacy of the antiquated Health Acts, and to a want of a satisfactory co-ordination between the health and education authorities. She had been opposed on principle to closing schools for the purpose of controlling the spread of infective diseases, and her action in this regard had been subjected to criticism.

Dr. Greig gave a short account of the practice in Victoria, and stated that their experience had taught them to rely on the exclusion of children suffering from these diseases from school, and of contacts.

Dr. Macdonald had no hesitation in condemning school closure for the purpose.

It was moved by Dr. Willis, seconded by Dr. Greig, and resolved:—

That the Conference is of opinion that school closure should not be adopted as a means of controlling the spread of infective diseases.

Special Schools for Mentally Defective Children.

Dr. Halley introduced a discussion on the advisability of instituting special schools for mentally defective children. She pointed out that a school of this description was in existence in Victoria, and that in one of the schools in Tasmania a class had been organized for mentally backward children. Nothing had been done in this direction in South Australia, notwithstanding the fact that she had urged the Government to undertake the work. She considered that these schools should be placed directly under the control of the Medical Branches of the Department of Education in each State.

Dr. Macdonald reported that there was a school for mentally defective boys in New Zealand, and a school for girls would shortly be opened.

Dr. Willis stated that arrangements had been made for a school of this description in New South Wales, but that the matter had been in abeyance since the outbreak of war. He pointed out that the teachers in these schools would have to be specially trained, and that it was largely a matter of expense. Other governmental departments would be involved, and the question of control would have to be taken into consideration.

Dr. Greig expressed the opinion that children attending these special schools should be examined frequently by the school medical officers. They had learned by experience in Victoria that the inspection of the children attending the deaf and dumb schools had resulted in considerable benefit to the little ones. No motion was considered.

At the beginning of the fourth session, Dr. Greig begged leave to move:—

That marked cases of thyroid enlargement be notified.

The motion was duly seconded by Dr. Macdonald, and was carried.

Medical Examination of Teachers.

Dr. Greig moved and Dr. Hawkins seconded:—

That all medical examinations for admission to the teaching services be conducted by the School Medical Services of the States.

The motion was carried.

In connexion with this matter it was pointed out that the standards of physical fitness for candidates seeking admission to the teaching services differed slightly in the different States. It was stated that this was due in part to conditions and considerations not connected with the medical aspect of the subject. It was therefore decided that the Conference should not recommend a fixed uniform standard.

The Medical Examination of Junior Cadets.

Dr. Greig called attention to the overlapping of the examinations conducted by the officers of the Federal and State authorities of schoolboys prior to enlistment as junior cadets. She pointed out that this subject had been referred to them by the Conference of Directors of Education. In her opinion, it was not right that the Federal and State authorities should be required to pay for a double medical examination of junior cadets, in view of the fact that one should serve the two purposes, namely, the ordinary school medical inspection and the examination required by provisions of the Defence Act. She thought that it would be more economical if the inspection of the State School Medical Officers were accepted for this double purpose. She suggested that the State authorities should be empowered to do this, and should receive a subsidy from the Federal authorities. She therefore moved:—

That this Conference calls attention to the fact that there is overlapping in the examination of junior cadets and the medical inspection of school children of the same age.

Dr. Halley seconded the resolution and supported Dr. Greig's contentions. After other members had expressed their views the motion was carried.

A Society of School Medical Officers.

Dr. Greig suggested that a Society of School Medical Officers should be formed. She recognized that it was undesirable and probably impossible to make its organization of a hard-and-fast description. She proposed that all school medical officers should be eligible for membership, and wished it to be distinctly understood that the meeting of this society, if formed, should not take the place of the Interstate Conference of School Medical Officers.

Dr. Willis expressed himself as being in accord with the proposal. He considered that the existence of a Society of School Medical Officers would add to the power and prestige of school medical officers in the eyes of both the community and the respective Governments. He considered that this matter was one on which every member of the Conference should have a right to record his vote, and that it should not be confined to the votes of the delegates only.

Dr. Greig therefore proposed:—

That a Society of School Medical Officers of Australasia be now formed.

Dr. Poidevin seconded the motion, which was carried unanimously.

A series of resolutions dealing with the machinery of the newly-formed Society was passed. Arrangements were made for the honorary membership of school medical officers from other parts of the world when visiting Australia. For the present no subscription would be required. Dr. C. S. Willis was elected President and Dr. J. Greig Honorary Secretary. These positions would be held until the second Conference of school medical officers, provided that the term of office did not exceed three years. It was arranged that a meeting of the members of the Society should be held at all medical or science congresses, and that there should be a general meeting at the time of each conference of school medical officers.

Open-Air Schools.

Dr. Macdonald asked the members present to express an opinion in regard to the value of open-air schools.

Dr. Greig pointed out that there was one open-air school in Victoria, which had been in operation for twelve months.

She proposed to include an account of the school in her next annual report.

Dr. Willis said that it was desirable that all schools should be so planned that they could be described as "open-air." He was of opinion that open-air schools really tried to solve the problem, which would not need to be met if legislation were passed to prevent overcrowding in houses. He would like to see electric fans installed in the city schools.

Future Conferences.

Dr. Greig moved:—

That, as this Conference has produced such beneficial results, they be held biennially in the various States alternately, and that such resolution be forwarded through the Directors of Education to their respective Ministers.

In seconding the motion, Dr. Halley stated that the Conference had proved of great assistance to her. The motion was supported by Dr. Hawkins and Dr. Macdonald, and was carried.

The business of the Conference was closed by the passing of the usual votes of thanks.

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the three weeks ending January 6, 1917:—

	Metropolitan Combined District. Cs.	Dths.	Hunter River Combined District. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	29	4	4	1	47	7	80	12
Scarlatina	82	2	13	0	50	0	145	2
Diphtheria	54	4	8	0	123	3	185	7
C'bro-Sp'l Menin.	7	4	0	0	7	3	14	7
Poliomyelitis	1	0	0	0	0	0	1	0
Pul. Tuberculosis*	47	12	3	2	7	0	57	14

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending January 7, 1917:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Diphtheria	48	2	26	1	74	3
Scarlatina	15	0	11	0	26	0
Enteric Fever	2	0	6	3	8	3
Pulmonary Tuberculosis	24	7	10	2	34	9
C'bro-Spinal Meningitis	4	—	3	—	7	—
Poliomyelitis	1	—	1	—	2	—

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending January 6, 1917:—

Disease.	No. of Cases.
Enteric Fever	19
Diphtheria	37
Pulmonary Tuberculosis	7
Scarlatina	15
Cerebro-Spinal Meningitis	1
Erysipelas	2
Ankylostomiasis	4
Malaria	1

THE HEALTH OF SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, for the fortnight ending December 30, 1916:—

	Adelaide. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Morbilli	7	0	50	0	57	0
Pertussis	4	0	59	1	63	1
Diphtheria	2	0	16	0	18	0
Pulmonary Tuberculosis	1	4	16	1	17	5
Enteric Fever	1	2	11	0	12	2
Scarlatina	1	0	6	0	7	0
Cerebro-spinal Meningitis	1	1	3	0	4	1
Erysipelas	1	0	0	0	1	0
Puerperal Fever	0	1	0	0	0	1

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, for the week ending December 2, 1916:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Enteric Fever	1	1	2
Diphtheria	5	0	5
Scarlatina	0	1	1
Pulmonary Tuberculosis	5	0	5
Erysipelas	2	0	2
Ophthalmia	1	0	1

THE HEALTH OF TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, for the week ending January 6, 1917:—

Disease.	Hobart. Cases.	Country. Cases.	Whole State. Cases.
Diphtheria	1	1	2
Pulmonary Tuberculosis	3	0	3

THE HEALTH OF NEW ZEALAND.

The following notifications have been received by the Chief Health Officer, New Zealand, for the month of December, 1916:—

	Auckland. Cases.	Wellington. Cases.	Canterbury. Cases.	Otago. Cases.	Total. Cases.
Scarlatina	66	69	93	23	251
Diphtheria	38	67	34	32	170
Enteric Fever	45	10	5	0	60
Pul. Tub'culosis	20	32	20	16	88
C'bro-S'pl. Men.	4	6	0	0	10
Poliomyelitis	0	1	1	0	2
Septicæmia	8	4	3	3	18
Oph. Neonat'r'm	2	2	0	0	4

THE BOARD OF HEALTH OF NEW SOUTH WALES.

(Concluded from Page 46.)

Government Bureau of Microbiology.

The report of the Principal Microbiologist of the Microbiological Laboratory, Dr. J. Burton Cleland, covers 28 pages, and is divided into some preliminary remarks, a record of the routine work performed during the year 1914, and a number of articles on various subjects.

A large number of examinations of pathological material was carried out at the Bureau. Among the bacteriological investigations those for diphtheria bacilli were the most numerous, and those for tubercule bacilli came next. A few specimens from alleged cases of actinomycosis, ankylostomiasis, anthrax and filaria were submitted, but in no case was the organism found. In addition four blood samples were examined with a negative result for malaria parasites, and three cases of suspected plague were investigated, also with negative results. Various pathological in-

vestigations were carried out from material submitted, and some foodstuffs and apparatus were examined.

During the course of the year 9,439 rats and mice were examined for plague infection. The fleas, bugs, lice and beetles infesting these animals were classified. In no instance was plague infection discovered. It appears that the last infected rodent was examined in 1910. During the period from March 1, 1904, to the end of 1910 946 infected rats and 171 infected mice were dealt with at the Bureau. The proportion of infected *Mus decumanus* of the total number examined varied from slightly over 1% in 1908 to 0.32% in 1909 and 0.07% in 1910. In regard to *Mus rattus* 1.22% were found to be infected in 1909 and 0.009% in 1910. The proportion of infected mice was 0.3% in 1905 and 2.06% in 1909.

Dr. E. W. Ferguson contributes a short account of the routine examination of blood by means of the Widal test, and of water, blood, fæces and urine for the culture of the typhoid bacillus in the diagnosis of enteric fever. It appears that the Widal test was carried out 588 times from 571 patients. A negative result was obtained in 403 cases, and an "incomplete negative" result in 21 cases. He does not state what dilutions were used. The number of cultural examinations was small, and he only succeeded in recovering the *bacillus typhosus* once from fæces.

Dr. Cleland appends a note on the protective inoculation against enteric fever. The vaccine was obtained from nine different strains. The bacilli in all these strains gave the typical sugar reactions. The vaccines were standardized by Wright's method, each cubic centimetre containing, according to this method of counting, 1,000 million bacilli. A number of communications received from medical practitioners giving their experience of the efficacy of the inoculations are cited.

Dr. Ferguson also records the details of the search for tubercle bacilli in sputum, and the application of the complement deviation test to blood serum in cases of suspected syphilis. Dr. Cleland devotes three pages to the bacteriological diagnosis of diphtheria. A large amount of tabular matter is devoted to the details concerning vaccines prepared in the Laboratory.

The second division of the report consists of a short communication on necrotic dermatitis of sheep. No fresh facts are brought to light, the communication being a resumé of Dr. R. B. Lendenfeld's researches published in 1885-1886.

In the third division, Drs. Palmer, Cleland and Ferguson record the case of a coal lumper who had died of heart disease, and in whose skeletal muscles *Trichinella spiralis* was found in immense numbers. The man was a native of France. It is stated that this parasite is common in the continent of Europe. Formerly it infected human beings frequently, and the disease which occurred in epidemics yielded a death-rate varying from 1% to 30%. The macroscopic and microscopic appearances of the lesions and of the nematode are described, and a brief account of the life history is also given. Some feeding experiments were undertaken on white rats and guinea-pigs, but no infection was achieved.

Dr. Cleland publishes a short note on the use of antiformin in the preparation of specimens of sputum containing hydatid hooklets. He considers that the antiformin has but a slight effect on the hooklets, while dissolving the mucus, etc., of the sputum, and that it is useful as an aid to the diagnosis provided that it is not left in contact with the material for too long.

Dr. Cleland gives a short account of an abscess in the thigh of a woman in the Coast Hospital. Sago-like hydatid daughter cysts were found in the pus of the abscess.

He also deals with a case of malaria in a baby eight days of age. The mother had had several severe attacks of malaria, and it is suggested that the infection of the infant had taken place either through a breach in the placenta, or as a result of direct infection from the maternal blood at the time of birth.

Dr. Ferguson gives an account of various Anopheline and Culicine mosquitoes collected in the neighbourhood of Sydney and along the Hawkesbury River. He also describes some March flies (Pangonia) and Tabanine flies which have been added to the collection. The majority of the specimens were collected in New South Wales, but a few were received from Townsville and Cape York. The identification of these flies has been undertaken by the staff of the Imperial Bureau of Entomology.

The last contribution is a short note by Dr. Cleland on the case of a child who had died of staphylococcal pneumonia and pleurisy. At the post-mortem examination some oval bodies were discovered in the affected lung. The similarity of these bodies to the ova of a worm was noted, but the helminthologist of the London School of Tropical Medicine asserted that they were not helminthic. It has been suggested by Mr. E. McKinnon that they are pollen grains.

Special Correspondence.

(By Our Special Correspondent.)

LONDON LETTER.

National Health Insurance.

The Commission of Investigation appointed by the Faculty of Insurance to enquire into the working of the National Health Insurance Act opened a series of provincial sittings at Manchester on September 20, 1916. Much useful and interesting information was elicited, and considerable dissatisfaction with the present working of the Act found expression from medical men, representatives of Friendly Societies, and others. Mr. Handel Booth, M.P., pointed out that during the five years in which the Health Insurance Act had been in force, £30,000,000 has been invested and 14,000,000 people had become insured.

The Secretary of the Grand United Order of Oddfellows said that the burden cast upon approved societies was very heavy. It was desirable that there should be a reinsurance of maternity benefit, so that the cost could be equally borne by all societies. The present method of administering medical benefit did not appear to provide adequate treatment for injured persons, and was not nearly so satisfactory as the service rendered by doctors to members of friendly societies prior to the inception of the National Insurance Act. Voluntary contributions might be abolished. Low wage contributors should be removed, by holding employers responsible for making good the full contributions.

Dr. John Brown, of Blackpool, expressed a strong opinion that the medical part of the Act had been a comparative failure. In some respects the Post Office contract system was the best of the various methods; but still it was not good enough. The ideal was the family doctor, not a hireling or mere contractor; not a sweated attendant, but a man paid at standard rates. He cited cases where, under the panel system, the remuneration worked out at 3d. or 6d. a visit. He knew of no country doctors who were satisfied with the fees.

Dr. Henderson, of Southport, said that at the inception of the Act he considered it England's second Magna Charta, and he was convinced that if everything reasonably necessary were done his forecast would yet be justified. The Act had already done good work, but the Government made a huge blunder when it handed over the administration of sickness and maternity benefits to approved societies. Those societies might be considered as occupying the position of first mortgagees. Could they wonder that doctors were as thorns in the flesh to those societies? The societies had entered on a campaign of calumny, carping criticisms and complaints against medical men and their work. Under due investigation these complaints mostly shrivelled up. It would be easy for the Government to pay up and clear out the approved societies, yet such action would be a certain forerunner of political troubles. Consequently the political machines were now evolving the component parts of a State medical service with a whole-time staff of medical officers. There was proof even in that room that a fierce struggle awaited the medical profession when the ship of national health insurance was dry-docked after the war. He would never accept service as a whole-time State official in connexion with medical practice.

The Secretary of the Blackpool Medical and Panel Committees gave evidence to the effect that there was antagonism between approved societies and doctors. There was lay control, and there were objections to the contract sys-

tem as applied to medical attendance. Other reasons for the failure of the panel system were the present system of prescribing and dispensing and the regulations and requirements of the Commissioners.

Dr. Rees, chairman of the Wigan Division of the British Medical Association, and a panel practitioner, believed there would never be a first-class medical service as long as it was an addendum to a general practice. A bribe was offered to the profession by what was called the "floating sixpence" to run the Act as cheaply as possible. The cheapest drugs were put up in the nastiest possible manner, and they had stock mixtures instead of Mr. Lloyd George's "rare and refreshing fruit." He did not think that from a medical point of view the country was better off than it was 20 years ago, and from that point of view the Act had been a failure. Many difficulties must be overcome before a whole-time medical service could be established.

There were many suggestions made at the conference for reforms, among which the following may be regarded as the more important: That approved societies be excluded absolutely from the management of national health insurance; that the Insurance Commissioners appoint a surveyor of national health insurance in each area; that the Panel Committee should not be recognized as a statutory committee; that the business or commercial element should be conducted in offices and with a staff quite distinct from the officers and staff employed by the local authority or corporations; that each panel doctor should be required to make a weekly return.

From this abbreviated account of the evidence given before the Commission of Investigation it will be obvious that considerable dissatisfaction exists with the National Health Insurance Act as it is presently administered. There is no doubt much to be said on the other side, but unless conflicting interests can be shortly reconciled, it looks as though a State Medical Service might prove the ultimate solution of present difficulties. Such an emergence would be, from many points of view, unfortunate, both in the interests of the profession and the public.

Oxford University and the War.

The Vice-Chancellor of Oxford University, in addressing Convocation on October 7, 1916, referred to the losses of the University from the ravages of war. He said that the Assistant Registrar, who audited the Roll of Honour, had informed him that about 10,500 University men were serving in the Navy and Army, while nearly 500 men were in Government employment in other departments. Amongst numerous distinctions of various kinds which had been obtained by them there were nine Victoria Crosses, 120 Distinguished Service Orders, 267 Military Crosses, 700 mentioned in despatches, besides four Distinguished Conduct Medals and two Distinguished Service Crosses. In addition to these there were 48 foreign orders, including 22 French and Russian. The proportion of losses was high. No less than 1,230 were reported killed and 103 missing. The University retained its predominantly military aspect. In ten colleges there were companies of Officer Cadet Battalions; the Royal Flying Corps School of Instruction occupied five. The Hospital in the Examination Schools had overflowed into University College. The country had drawn upon the learning of their Professors and the resources of their laboratories, and was finding that Professors and Dons were not infrequently practical men of affairs. Might they hope that this lesson would prove permanent, and that conventional Oxford would disappear from fiction and journalistic letterpress. University legislation had pursued, as might be expected, a quiet course during the past year. Two statutes, however, were of importance such as to deserve mention. Under one of them a delegacy had been constituted to look after the interests of oriental students in the University. The statute was the result of long discussion in Oxford and with the India Office. He hoped that the existence of the delegacy would make clearer the relations between the University and the Universities in India and other oriental countries, and place the orientals who came to Oxford in a more definite position there. The other statute concerned the Honour School of Chemistry, and provided that no one would appear in the class list in this school who had not had a period of training in research work. The University, by means of this statute, had declared its intention to educate men for such posts. They hoped that the commercial policy of British firms would find employment for the men they educated. This last mentioned statute was an attempt on the part of the University to meet one of the educational needs which the war had brought to notice, and there could be no doubt that it was an important one.

The claims of natural science in education had, in his opinion, been sadly neglected, and some means of remedy ought to be found. It was not merely that they wanted to produce more advanced students of natural science; they wanted everybody, including the average people who would not be advanced students of anything, to be aware of or in some degree to understand, the scientific point of view. He did not think this would be easy, because it would mean in the end a great psychological change in the nation; they would have to give up the profound distrust of expert knowledge which prevailed so widely among them. At the same time it was perhaps legitimate to express the hope that if they set out on this adventurous course of reform they would proceed upon their own lines and not attempt to import German methods and German rigidity of type into their system of education without serious and deliberate criticism.

A Bachelor of Education Degree in Edinburgh University.

The King in Council has sanctioned the institution of a new degree in the University of Edinburgh. Candidates must be graduates in arts and science of any Scottish or approved university.

The course extends over two years, and there are two examinations, a first and a final. Courses required for the Bachelor of Education are: (*a*) The ordinary course in psychology extending over at least seventy-five class meetings. (*b*) A course in the theory and history of education, extending over at least seventy-five class meetings. (*c*) A course in modern educational systems and problems, extending over at least twenty-five class meetings, or any equivalent course of instruction instituted by the University Court after consultation with the Senatus. (*d*) An advanced course in psychology extending over at least fifty class meetings. (*e*) An advanced course in the theory and history of education, extending over at least fifty class meetings. (*f*) An advanced course in experimental education, extending over at least fifty class meetings, or any equivalent course of instruction instituted or approved by the University Court after consultation with the Senatus. (*g*) A course in the administration and organization of primary and secondary schools, extending over at least twenty-five class meetings, or any equivalent course of instruction instituted or approved by the University Court after consultation with the Senatus.

The first five courses must be taken in Edinburgh University.

Obituary.

JULIA CARLILE FOX.

Sixteen years ago an earnest little band of Christian women sought to alleviate the condition of the poor women of Sydney by ministering to their bodily and spiritual needs. The leading spirit of this undertaking was a young Sydney graduate, Julia Carlile Thomas. She was the eldest daughter of the late S. S. Carlile Thomas. Born in London in the year 1874, she was brought out to Australia in early childhood and educated at the High School in Sydney. In the year 1897 she completed her medical course at the Sydney University, and obtained the degrees of M.B., Ch.M. After qualifying, she served as Resident Medical Officer at the Children's Hospital, then situated at Glebe. In 1899 she took a journey to England for the purpose of equipping herself for medical missionary work in India. On the journey she discussed her plans with a kindred soul, Mrs. E. E. Dixson, who persuaded her that "charity begins at home" and that the Sydney women with their sick babies and limited means were in urgent need of a strong help, extended by someone who had the knowledge to attend to their bodily ills. The picture of these women waiting for hours in the out-patients' departments of the metropolitan hospitals without that tender sympathy which only women can extend to their sisters in want decided the young doc-

tor to apply her gifts in the city of her childhood. She thereupon sought the tuition of the medical staff at a London medical mission, and within a short time returned to Sydney, taking up her residence at Hunter's Hill. Mrs. Hugh Dixson placed a sum of money at Dr. Thomas's disposal, to enable her to start the Sydney Medical Mission in a small shop in Elizabeth Street, close to Wrexford Street. Her great personal charm and her skill in organizing enabled her to attract other capable workers. Miss Irene Phillips (now Mrs. Read), Miss Eleanor Huntley, through whose services as Honorary Secretary to the Mission incalculable good has been done, and many others, were drawn into the work and secured its success. She soon obtained valuable collaboration from other medical women, including Drs. Kate Hogg, Agnes Bennett and Grace Russell, who conducted a gynæcological clinic at the Mission. The stability of the Mission, to which she and Mrs. Dixson had given birth, was further safeguarded by the constitution of an Advisory Committee, with Professor Wilson, Dr. W. H. Crago, Dr. G. E. Rennie, Dr. W. C. McClelland, Dr. J. L. T. Isbister, Dr. Storie Dixson and the late Dr. Maynard Pain as members. Julia Carlile Thomas attended her outpatients regularly during the daytime and in the evenings, and also visited the poor patients in various parts of the city and poorer suburbs. She trained the voluntary workers to dispense, and soon organized a band of lady visitors. She was the centre around whom the whole machine moved; she spent herself in her work, and was well known as one of the most unselfish of women in Sydney. Her patients spoke of her affectionately as "Dr. Tommie," and brought her love and reverence in return for the sacrifice which she was making. After a few years of ardent work her body proved frail as compared with her spirit, and a serious breakdown ensued. While still a patient at the Second Mission House herself she chose to share her joys and sorrows with Dr. Robert A. Fox. After her recovery, she continued to take a keen interest in the mission, and gave her services as a member of the Advisory Committee during the remainder of her life.

A woman who had proved herself so valuable a guide, friend and helper to the sick poor could scarcely have failed to make an ideal wife and mother. Julia Carlile Fox was both. An early illness, ruthless in its course, robbed her husband and her two children of their best friend on December 28, 1916.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix.

Toowoomba Hospital for Insane, Assistant Medical Superintendent.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Brisbane United F.S. Institute
WESTERN AUSTRALIA. (Hon. Sec., 230 St. George's Terrace, Perth.)	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Department of Public Instruction—Appointments as Salaried Medical Officers, with duties which include the treatment of school children. Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	F.S. Lodges, Wellington, N.Z.

Diary for the Month.

Jan. 23.—N.S.W. Branch, B.M.A., Ethics Committee.
Jan. 24.—Northern Dist. Med. Assoc., at Tamworth, N.S.W.
Jan. 30.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Jan. 31.—Vic. Branch, B.M.A., Council.
Feb. 7.—Victorian Branch B.M.A., Branch Meeting.
Feb. 13.—N.S.W. Branch, B.M.A., Ethics Committee.
Feb. 15.—Victorian Branch, B.M.A., Council.
Feb. 20.—N.S.W. Branch, B.M.A., Executive and Finance Committee.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.